DOCUMENT RESUME

ED 187 267 HE 012 741

AUTHOR Carlson, Daryl E.
TITLE Student Access to Postsecondary Education: Comparative Analysis of Federal and State Student Aid Programs. Summary of SISFAP-Study D.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Office of Planning, Budgeting, and Evaluation.
PUB DATE 27 May 80
CONTRACT 300-75-0382
NOTE 142p.; Contains some small print.

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS *Access to Education; Attendance Patterns; *College Attendance; College Students; Comparative Analysis; Data Collection; Demography; Educational Finance; Expenditures; *Federal Aid; *Federal State Relationship; Financial Policy; Higher Education; Inflation (Economics); Program Administration; *State Aid; *Student Financial Aid

ABSTRACT

A comparative analysis of federal and state student financial aid programs assesses the impact of federal student aid on the attendance behavior of individuals, on the financing behavior of colleges and universities, and on the financing behavior of state and local governments. Enrollment, student budget, residence and migration, student characteristics, institutional finance and federal student aid data are analyzed at the state aggregate level for nine consecutive years, from 1966-67 through 1974-75. In addition, an extensive file of state demographic and economic information is compiled with annual information on population, age, sex, race, income, and on state/local expenditures, high school graduates and higher education degrees. It is shown that the level of funding for federal student aid programs has increased tremendously, and many states have developed their own student financial assistance programs. However, the level of total federal support for both institutions and students has not kept pace with both the rate of enrollment growth and the rate of inflation. (DC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED187267

SUMMARY
SISFAP-Study D

Student Access to Postsecondary Education
Comparative Analysis of Federal
and State Student Aid Programs

by
Daryl E. Carlson

Supported by
Office of Planning, Budgeting and Evaluation
U. S. Office of Education
(Contract No. 300-75-0382)

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

HE 012 741

MAY 27 1980

CONTENTS

		Page
I.	Illustrative Results	1
II.	Introduction to the Study	10
III.	Data and Methodology	12
IV.	Higher Education Finance Trends	18
V.	State Socio-Economic-Higher Education Environments	43
VI.	State Variations in Financial Burden	48
VII.	State Variations in Access	80
VIII.	Federal Student Aid Impact on Financial Burden	104
IX.	Federal Student Aid Impact on Access	122
X.	State Allocation Formulas	128

I. ILLUSTRATIVE RESULTS

A. National Funding Levels

(1) The level of total Federal support for both institutions and students[1] has not kept pace with both the rate of enrollment growth and the rate of inflation. On a per FTE undergraduate basis, the level of Federal funding has increased from $695 in FY 1967 to $746 in FY 1975 or by 7%, which is far below the cumulative rate of inflation during this eight-year period.

(2) Total Federal support for higher education (not per student support) has increased at an average annual rate of 6% while the Office of Education (O.E.) student aid programs[2] have been increasing at an average annual rate of almost 20% between FY 1967 and FY 1975. As a result, the O.E. student aid portion of total Federal higher education support has increased from 10% to 30% during this period of time. With the more recent, rapid expansion of the Basic Educational Opportunity Grant program, the O.E. share of total Federal support is even greater at the present time. The focus of this study is on the impact of this increase in funding for the O.E. student financial assistance programs.

---

[1] Includes Federal funds for basic research, research facilities, training grants, fellowships, facilities and equipment, other institutional support, other student assistance, other assistance, student loan programs, and college facilities loans.

[2] SEOG - Supplemental Educational Opportunity Grant Program; NDSL - National Direct Student Loan program; CWSP - College Work-Study Program; BEOG - Basic Educational Opportunity Grant Program; SSIG - State Student Incentive Grant Program; and GSLP - Guaranteed Student Loan Program.

(3) On a per FTE undergraduate basis, the level of funding for the O.E. programs has increased from $130 (FY 1967) to $550 (FY 1977) or at an average annual rate of approximately 16%.

(4) Overall in FY 1977 O.E. student aid programs provided financial assistance amounting to around 16% of the total cost of college attendance. In FY 1977, the level of O.E. funding for these programs was approximately $550 for each full-time-equivalent undergraduate attending college in the United States.

B. Access to Higher Education

(1) The ratio of FTE male undergraduates to the 18-to-20 year-old male population reached a peak of 0.62 during 1969 through 1972 and then declined by 11% to 0.55 in 1975. The same ratio for women increased steadily until 1973, reaching a peak of 0.48, and then declined by 4% to 0.46 in 1975. In 1967 the ratio of male to female enrollments was 1.47. By 1975, this ratio had declined to 1.20.

(2) State by state variations in enrollment rates are quite pronounced. Male enrollment rates ranged from 0.36 to 0.79 during 1975. For women, they ranged from 0.32 to 0.74.

(3) Nearly half of the variation in the enrollment rates across the states in FY 1975 is explained by the educational attainment level of the population, the high school graduation rate, the size of the public two-year sector relative to the four-year sector, and the percent of the population living in metropolitan areas.

(4) A major determinant of the lower enrollment rates found in states with large nonwhite populations is the lower high school graduation rates in these states.

(5) The level of educational attainment in the state showed a slight

negative relationship to enrollment increases between 1968 and 1974. The results suggest that the "highly educated" states are not becoming even more so relative to the other states. Perhaps some "catching-up" is occurring in those states with the least educated populations.

(6) States with larger percentages of nonwhite population dramatically increased their level of higher education participation relative to other states between 1968 and 1974.

(7) The enrollment rate gap between higher and lower income states did not narrow between 1968 and 1974.

(8) The total amount of O.E. student aid per FTE undergraduate was not associated with enrollment rate levels or changes over time either directly or when simultaneously analyzed with other state variables.

(9) In FY 1975 five states with the highest enrollment rates had an average tuition charge of $468, while the bottom five states had an average tuition charge of $1,135. The average wage earner in the five states with the highest enrollment rates would have to work 13.2 weeks to support a full time resident student for an academic year, compared to 19.6 weeks for the bottom five states.

C. Student Budgets

(1) At the national level, the average wage earner would have to work fewer weeks to support a full-time resident student in 1975 than in 1967. This trend is partially the result of the rapid growth of the lower cost, public two-year colleges during this period. These changes, however, are quite small. The percentage change between FY 1967 and FY 1975 in the ratio of the average student budget to average weekly earnings has been: +2.2% for public four-year institutions, +2.7% for public two-year colleges, and +1.6% for private four-year institutions.

(2) State variations in annual budgets for resident students are quite pronounced within institutional categories: from $1,830 to $2,950 for public four-year institutions, from $1,500 to $2,950 for public two-year colleges, and from $2,660 to $4,860 for private four-year colleges.

(3) For all types of institutions, states with higher average weekly earnings have both higher gross budgets and higher net budgets.[3] However, when the net budget is divided by average weekly earnings, the financial burden associated with attending college appears to be less in the "richer" states. The average worker in the "poorer" states has to work more weeks to support a year of college attendance on a net budget basis.

(4) States with large nonwhite and poor populations have smaller gross and net budgets but larger net budgets relative to average weekly earnings. These "poorer" states also have a larger tax burden to support higher education (see results, below, for State and Local Expenditures).

(5) As expected, states with higher average tuition have higher gross budgets in all types of institutions. Since this same relationship occurs both for net budgets as well as for net budgets divided by earnings, Federal aid does not neutralize the effect of tuition on student budgets across states.

D. State Distribution of O.E. Student Aid

(1) The level of O.E. student aid per FTE undergraduate is extremely varied from state to state. Five states received more than $1,500 per FTE undergraduate in FY 1975 while eleven states received less than $500.

[3] Net budget equals total cost of attendance minus O.E. student aid, state student aid, and nonpublic institutional student aid.

(2) Wide state variations are also evident in how aid "packages" are composed. In FY 1975, seven states had O.E. aid packages averaging less than 17% grant funds, while in three states aid packages averaged more than 40% in grant funds.

(3) In FY 1975 states with large low income populations received larger amounts of BEOG funds per student and had smaller proportions of loans in their aid packages.

(4) States with larger levels of total O.E. student aid per student are also likely to have:

a. smaller nonwhite populations.

b. larger enrollments at private four-year institutions and, hence, higher average tuitions and higher levels of student aid from institutional sources.

(5) States with larger low income populations also tend to have:

a. larger amounts of BEOG, CWSP, and NDSL dollars per student.

b. smaller percentages of loans among total O.E. aid dollars.

(6) States with larger percentages of nonwhite populations also tend to have:

a. large amounts of BEOG dollars per student.

b. larger percentages of grants among total O.E. aid dollars.

(7) SSIG dollars are heavily concentrated in those states with larger private four-year institutional sectors. This relationship is to be expected, since these same states have developed larger state student aid programs of their own.

(8) Compared to states with no student aid programs, states with aid programs of their own receive more O.E. aid funds: 25% more dollars per student in public four-year institutions, 38% more in public two-year colleges, and 29% more in private four-year institutions.

(9) The five states with the most O.E. dollars per student, compared

to the five states with the fewest O.E. dollars, also have more student aid from nonpublic institutional resources: 70% more in public four-year institutions, 120% more in public two-year colleges, and 20% more in private four-year institutions.

E. Tuition

(1) For most types of institutions the share of general revenues provided by tuition and fees remained relatively constant between 1967 and 1974. The principal exception is the public two-year colleges, where the tuition share has actually decreased.

(2) The proportion of instruction and support expenditures[4] covered by tuition and fees varies considerably from state to state. For example, tuition revenues in public four-year institutions represent less than 20% of instructional expenditures in eight states while in two states they represent over 70% of instructional expenditures.

(3) Students in states with higher instructional expenditures have to pay a larger proportion of these expenditures through tuition and fees.

(4) Average tuition at both public and private four-year institutions is significantly higher in states with larger enrollments of low income students.

(5) Students in states with the largest nonwhite populations pay less tuition and a smaller share of instructional expenditures.

(6) States with higher tuition also have:

a. larger amounts of SSIG and GSLP dollars per student.

b. larger percentages of loan dollars among total O.E. student aid.

---

[4]The sum of instruction and departmental research, libraries, and physical plant maintenance and operations.

(7) Private four-year institutions with higher levels of tuition appear to use a larger amount of their revenues for student aid.

F. Institutional Student Aid

(1) The total share of institutional student aid from nonpublic sources has declined significantly since 1967. The percent from nonpublic sources has decreased from 35% to 29% in public four-year institutions, from 55% to 14% in public two-year colleges, and from 61% to 46% in private four-year institutions.

(2) State variations in the mix of institutional student aid sources at public four-year institutions are very diverse. Six states received over 50% of these aid revenues from nonpublic sources in FY 1974. Five states generated 10% or less from nonpublic sources.

(3) In all types of institutions, the level of institutional student aid per student is not related to the percent of either nonwhite or low income families in the population.

G. State and Local Higher Education Expenditures

(1) The per capita level of state and local expenditures for institutions of higher education varied from $48 to $146 in FY 1974. Five states allocated more than 14% of their total state and local revenues to higher education while six states allocated less than 7%.

(2) The states with higher levels of educational attainment have a larger financial commitment to higher education as measured by (a) state and local higher education expenditures per 18-20 year old, (b) the percent of total state and local education expenditure for higher education, and (c) the percent of total state and local expenditures for higher education.

(3) The percent of low income families in the state is not related

to per capita state and local higher education expenditures. This means that the poorer states are having to pay a greater share of their state revenues for higher education. Since the percent of total expenditures invested in higher education are both positively related to the percent of low income families in the state, the poorer states are making a relatively stronger financial commitment to higher education that the richer states.

(4) States with larger nonwhite populations spend less per 18-20 year old on higher education. Since state and local education expenditures for higher education and the percent of total state and local expenditures for higher education are both negatively related to the percent of nonwhites in the population, states with large nonwhite populations are making a relatively smaller financial commitment to higher education.

(5) Colleges and universities in states with large low income populations do not, on the average, spend less per student for instruction and support than institutions in the "wealthier" states.

H. State Student Aid Programs

(1) The magnitude of state student financial assistance programs has increased dramatically from $236 million in FY 1970 to $500 million in FY 1976.

(2) As of FY 1974, only four states were directing more than 5% of their total state support to higher education through need-based student aid programs.

(3) The level of state student aid per FTE undergraduate has a significant positive relationship with average tuition in all types of institutions.

(4) States with higher levels of state student aid also have:

a. smaller low income and nonwhite populations.

b. more SSIG and GSLP dollars per student.

c. larger percentages of loans among total O.E. aid dollars.

II. INTRODUCTION TO THE STUDY

Federal student aid programs operate within a complex and dynamic system of higher education in the United States. Across the fifty-one states, the higher education systems have evolved in a variety of ways to serve diverse populations. The objective of this study is to assess within the diversity of these environments the impacts of federal student aid on the attendance behavior of individuals, on the financing behavior of colleges and universities, and on the financing behavior of state and local governments. Time-series data on institutions and state and local governments for fiscal years 1966-67 through 1974-75 are analyzed predominantly at the state aggregate level. Institutional and state and local government financing structures are analyzed along with student financing patterns. In this way all dimensions of higher education finance are placed into perspective with student financial assistance.

The data base assembled for this study is quite extensive. Most of the raw data has been collected at the institutional level and has been aggregated by institutional category to the state level. Enrollment, student budget, residence and migration, student characteristics, institutional finance, and federal student aid data have been merged and linked together for nine consecutive years, FY 1967 through FY 1975.

For the purpose of this study, the often referred to objectives for higher education of access and choice are assessed both in terms of enrollment rates and in terms of the net cost of attendance. The time-series information along with the variations across the states provide an excellent base of data for this type of analysis.

The period FY 1967 to 1975 is an extremely useful span of years for

an analysis of student aid programs for two major reasons. First, during this period of time the level of funding for federal student aid programs has increased tremendously and many states have developed their own student financial assistance programs. Second, the economic and demographic environments in which higher education exists has undergone significant change during this period of time along with the attitudes of young adults towards higher education.

As support to this report, three additional documents are available. The main report, Student Access and Federal Student Aid Programs: A State by State Analysis of Higher Education Financing, contains a detailed documentation and analysis of higher education financing across states and over time. A set of eleven appendices, each consisting of a series of tables describing some facet of higher education is contained in a report titled, Higher Education Patterns and Trends: Descriptive Data by States for FY 1967 to FY 1975. These tables contain data for each state and for individual years, FY 1967 to FY 1975. The detailed specifications of the data base for this study are contained in a report titled, Higher Education Data Base: FY 1967 to FY 1975.

III. DATA AND METHODOLOGY

This study has been designed to empirically assess the historical variations across states along a large number of higher education attendance and financing dimensions and to examine the extent to which Federal student aid programs have narrowed these state variations with respect to the accessibility to and financial burden of attending higher education. It is important to note that the focus of this study is on state-level variations. Although a variety of population and student demographic factors are included in the analysis, the level of the study does not permit any assessment of what is happening to detailed categories of students within specific states. An effort is made, however, to analyze variations across states for categories of higher education institutions.

The data base assembled for this study is quite extensive. Most of the raw data was collected by the Office of Education at the institutional level and has been aggregated by institutional category to the state level. Enrollment, student budget, residence and migration, student characteristics, institutional finance, and Federal student aid data have been merged and linked together for nine consecutive years, FY 1967 through FY 1975. In addition, an extensive file of state demographic and economic information has been assembled which contains information by year on population by age, sex, race, and income, on state/local revenues and expenditures, on high school graduates, and higher education degrees.

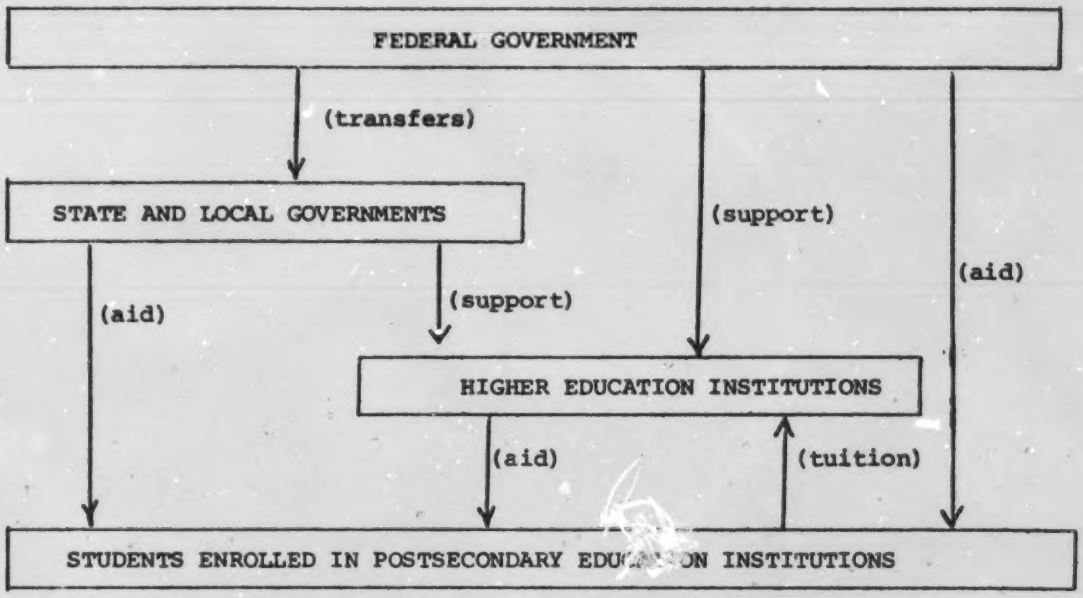
As outlined above, the analysis focuses on two dimensions of educational opportunity: financial burden and access. The analytical frameworks developed in this study for each of these issues are outlined below.

Financial Burden Framework:

Federal student financial assistance programs operate within a very complex system of higher education in the United States. To determine the relative and marginal impact of these programs on higher education, it is necessary to place the student aid programs in perspective with many other key dimensions of higher education finance. This procedure is especially necessary when the analysis examines the behavior of the higher education systems between states as well as over time. The financial burden analysis centers on the "flow-of-funds" between four major segments of the higher education system as shown in Figure 1: the Federal government, the state and local governments, the institutions of higher education, and the students. Obviously, this diagram is a gross over-simplification of the system with many of the dynamics left out. For example, students and/or their parents pay state, local, and Federal taxes. Also, the private sector which is not shown in Figure 1 provides a substantial amount of money to higher education through gifts to institutions and scholarships to students. Each of the fund "flows" illustrated in Figure 1 are analyzed in detail across states and over time and are related to a variety of other state characteristics. The important point in Figure 1 is that Federal student aid is only one of the fund "flows" which determine the financial burden associated with college attendance.

A more direct linkage between financial burden and all types of higher education financing sources is illustrated through a set of three definitional equations. The first equation is a definition of net student budget:

Figure 1: A Simplified Flow-of-Funds Structure for Higher Education



$$\begin{pmatrix}\text{Net Student Budget}\end{pmatrix} \equiv \begin{pmatrix}\text{Living Expenses and Supplies}\end{pmatrix} + \begin{pmatrix}\text{Tuition}\end{pmatrix} - \begin{pmatrix}\text{Federal Student Aid}\end{pmatrix} - \begin{pmatrix}\text{State Student Aid}\end{pmatrix} - \begin{pmatrix}\text{Institutional and other private student aid}\end{pmatrix}$$

It should be noted that this net student budget definition does not include any assessment of parental contribution (estimated or actual). For the aggregate type of analysis in this study, such an estimate would be fairly difficult to construct. The institutional student aid component includes all nongovernmental sources of student financial assistance administered through the school. The second equation represents a balanced general educational budget for institutions. Although for any given institution and yearthis simplified budget may not exactly balance, over a period of years the definition should hold.

$$\begin{pmatrix}\text{Expenditures Per Student}\end{pmatrix} \equiv \begin{pmatrix}\text{Federal Institutional Revenues Per Student}\end{pmatrix} + \begin{pmatrix}\text{State And Local Institutional Revenues Per Student}\end{pmatrix} + \begin{pmatrix}\text{Private Institutional Revenues Per Student}\end{pmatrix} + \begin{pmatrix}\text{Tuition}\end{pmatrix}$$

Since tuition appears in both of the above equations, it is possible to combine the equationsinto one. The purpose is to derive a single equation relating the net student budget to <u>institutional</u> finance variables as well as student aid variables. It should be emphasized that none of these equations imply any behavioral relationships between financing factors and net student budgets. The equations are simply definitions. The combined equation is:

$$\begin{pmatrix}\text{Net Student Budget}\end{pmatrix} \equiv \begin{pmatrix}\text{Expenditures Per Student}\end{pmatrix} - \begin{pmatrix}\text{Federal Institutional Revenues Per Student}\end{pmatrix} - \begin{pmatrix}\text{State and Local Institutional Revenues Per Student}\end{pmatrix} - \begin{pmatrix}\text{Private Institutional Revenues Per Student}\end{pmatrix}$$

$$+ \begin{pmatrix}\text{Living Expenses and Supplies}\end{pmatrix} - \begin{pmatrix}\text{Federal Student Aid}\end{pmatrix} - \begin{pmatrix}\text{State Student Aid}\end{pmatrix} - \begin{pmatrix}\text{Institutional and other private student aid}\end{pmatrix}$$

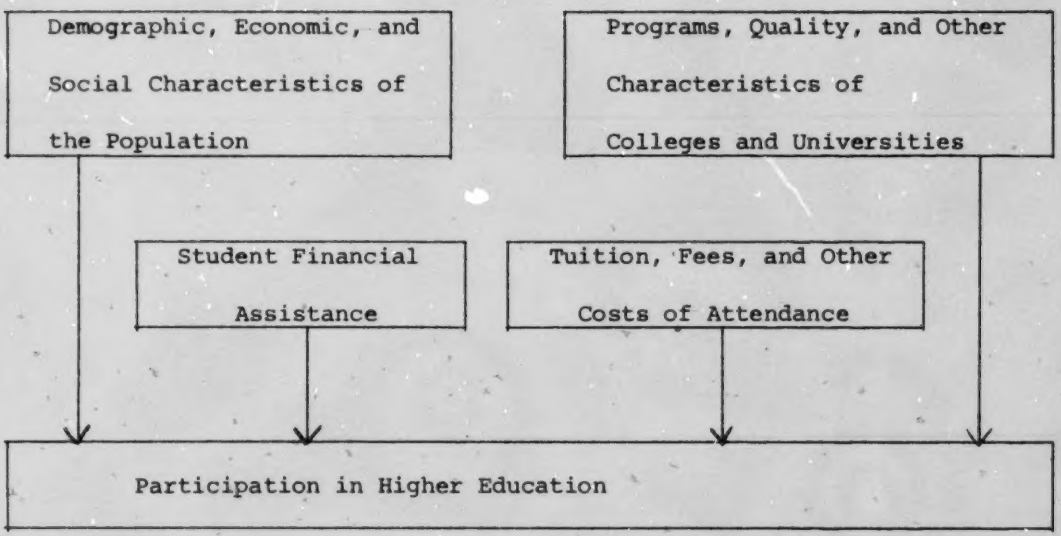
Each component of the above equation is analyzed within the study from the point of view that variations across states and over time of each variable has an effect on the level of the average net student budget. Federal student aid is only one of those components.

Access Framework:

The other component of the analysis has been designed to determine the extent to which funding levels and distribution mechanisms influence participation in higher education. The level of participation in higher education is the result of many factors. Four major categories of variables that influence participation levels to some extent are illustrated in Figure 2: demographic factors, characteristics of higher education institutions, costs of attendance, and student aid.

Enrollment comparisons across states are directly not very meaningful since the population base varies considerably from state to state. For this study it was necessary to calculate ratios by dividing alternative enrollment variables by different population variables in order to quantitatively measure the relative levels of participation across states and over time. The basic approach in the access analysis was to relate participation variation across states to a variety of variables from each of the four categories illustrated in Figure 2. Federal student financial assistance is just one part of a very complex set of interrelated factors.

Figure 2: Outline of the Major Factors that Influence Participation Levels


Demographic, Economic, and Social Characteristics of the Population
Programs, Quality, and Other Characteristics of Colleges and Universities
Student Financial Assistance
Tuition, Fees, and Other Costs of Attendance
Participation in Higher Education

IV. HIGHER EDUCATION FINANCE TRENDS

Total federal funds for education and related activities which include support for all levels of education have increased from $12.257 billion in FY 1967 by approximately 66% to $20.379 billion in FY 1975. This increase represents an average annual growth rate of approximately 6-1/2% compared to an average increase of 8% for the total federal budget. Over the same time period, total federal funds for higher education which include funds for basic research, research facilities, training grants, fellowships, facilities and equipment, all other institutional and student assistance, and college facilities and student loans have increased from $4.376 billion by approximately 58% to $6.925 billion at an average annual growth rate of about 6%. As shown in Table 1 over the past nine years slightly more than one-third of the federal expenditures on all of education has gone to support higher education. As a percent of total federal outlays, higher education support has represented between 2.8% and 2.1% during the period FY 1967-1975.

Since the total federal outlays for higher education have increased at an average annual rate of 6% while the O.E. student aid programs have been increasing at an average annual rate of about 20%, a major shift in the delivery of federal funds to higher education has been occurring. The changing pattern of federal support can be examined in two parts as shown in Table 2. First, the split between federal funds for institutional support versus student assistance has dramatically changed. In FY 1967, 65% of the federal higher education funds went for institutional support of basic research, research facilities, all other institutional support, and college facilities loans. By FY 1975 this percentage had dropped to 28%. The actual dollars of federal support to institutions decreased from $2.844

Table 1 : Federal Funds for Education: FY 1967-FY 1975

Year	Total Federal Funds for Education and Related Activities[1]	Federal Funds for Higher Education[2]		
		Dollars	Percent of Total for Education	Percent of Total Federal Outlays
	($ millions)	($ millions)		
1967	12,257	4,376	36	2.77
1968	11,368	3,833	34	2.14
1969	12,308	4,324	35	2.34
1970	12,651	4,421	35	2.25
1971	14,939	5,230	35	2.47
1972	16,298	5,521	34	2.38
1973	17,428	6,332	36	2.57
1974	19,379	6,966	36	2.60
1975 (est.)	20,379	6,925	34	2.21

1/ Includes Federal funds supporting all levels of education in educational institutions and other Federal funds for education and related activities.

2/ Includes Federal funds for basic research, research facilities, training grants, fellowships, facilities and equipment, other institutional support, other student assistance, other assistance, student loan programs (NDSL), and college facilities loans.

SOURCE: U.S. Department of Commerce, Statistical Abstract of the U.S., p. 146, 1975.

Table 2: Federal Funds for Higher Education: FY 1967-FY 1975

Year	Federal Funds for Higher Education[1]	Percent of Total Federal Funds for Higher Education: Institutional Support[2]	Student Assistance[3]	Office of Education Programs[4]	Percent O.E. Programs of Total Student Aid
	($ millions)				
1967	4,376	65%	35%	10	29
1968	3,833	57	43	13	30
1969	4,324	55	45	12	27
1970	4,421	50	50	14	28
1971	5,230	42	58	17	29
1972	5,521	38	62	18	29
1973	6,332	32	68	17	25
1974	6,966	28	72	23	32
1975	6,925	28	72	30	42

1/ Sum of institutional support and student assistance as defined below.

2/ Institutional support includes basic research, research facilities, facilities and equipment, other institutional support, other assistance, and college facilities loans.

3/ Student assistance includes training grants, fellowships, other student assistance, and student loans (NDSL).

4/ Federal capital contributions to the six O.E. student aid programs (SEOG, CWSP, NDSL, GSL, BEOG, SSIG).

SOURCES: (a) U.S. Department of Commerce, Statistical Abstract of the U.S., p. 146, 1975.
(b) Bureau of Postsecondary Education, FACTBOOK: Summary of Program Information through FY 1975, 1975.

billion in FY 1967 to $1.939 billion in FY 1975. The student assistance portion of total federal higher education support has therefore increased from 35% in FY 1967 to 72% in FY 1975. A second shift of importance for this study, that is emerging currently, is the changing portion of the total student assistance funds made up by the six O.E. student aid programs. As shown in Table 2 the O.E. programs represented 29% of the total federal student assistance monies in FY 1967 and 42% in FY 1975. The change has essentially occurred since FY 1973 and represents the introduction (to a large extent) of the BEOG program. In the near future this percentage is most likely going to become even larger as the BEOG program expands and as the number of G.I. bill eligible students decline.

As shown in the preceding section for all federal funds to higher education, the split between institutional support and direct student support has shifted dramatically towards more funds to students. This shift is also observed from the data for direct operating support to institutions and need-based support to students. As shown in Table 4 , these funds were split 86% for institutional support and 14% for direct student support in Fy 1967. By FY 1975 this split had shifted to 56% for institutional support and 44% for student support. Due to the continued rapid growth in the BEOG program since 1975, it is quite likely that the level of federal support to student funding now exceeds the level of operating support to institutions.

It is interesting to note that the level of federal support for both institutions and students has not kept pace with both the rate of enrollment growth and the rate of inflation. Using the data in Table 3 the level of federal funding for these purposes has increased from $3.1 billion in FY 1967 to $4.8 billion in FY 1975; an increase of 55%. During this period of time, FTE undergraduate enrollment has increased by 43% and the purchasing power

Table 3: Federal Support to Higher Education ($ million)

	Institutional Support				Office of Education Student Assistance				
Year	General Appro-priations	Sponsored Research	Sponsored Programs	Total Insti-tutions	Grants	Loans	Work	Total Students	Total
1967	414	1,433	829	2,676	109	195	134	438	3,114
1968	470	1,395	828	2,693	137	231	134	502	3,195
1969	469	1,283	832	2,584	145	243	143	531	3,115
1970	468	1,170	836	2,474	165	309	147	621	3,095
1971	468	1,057	841	2,366	177	393	313	883	3,249
1972	515	1,254	1,037	2,806	210	518	272	1,000	3,806
1973	607	1,377	1,101	3,085	260	533	270	1,063	4,148
1974	569	1,254	1,044	2,867	764	558	270	1,592	4,459
1975	533	1,142	990	2,665	1,080	602	420	2,102	4,767

Table 4: Distribution of Federal Support to Higher Education by Function (percent)

	Institutional Support			Student Assistance				
Year	General Appro-priations	Sponsored Research	Sponsored Programs	Grants	Loans	Work	Total Insti-tutions	Total Students
1967	13.3	46.0	26.6	3.5	6.3	4.3	85.9	14.1
1968	14.7	43.7	25.9	4.3	7.2	4.2	84.3	15.7
1969	15.1	41.2	26.7	4.7	7.8	4.6	83.0	17.0
1970	15.1	37.8	27.0	5.3	10.0	4.7	79.9	20.1
1971	14.4	32.5	25.9	5.4	12.1	9.6	72.8	27.2
1972	13.5	32.9	27.2	5.5	13.6	7.1	73.7	26.3
1973	14.6	33.2	26.5	6.3	12.8	6.5	74.3	25.7
1974	12.8	28.1	23.4	17.1	12.5	6.1	64.3	35.7
1975	11.2	24.0	20.8	22.7	12.6	8.8	55.9	44.1

of the dollar has dropped 48%. On a per FTE undergraduate basis the level of federal funding has increased from $695 in FY 1967 to $746 in FY 1975 or by 7% which is far below the cumulative effect of inflation during this eight year period.

In FY 1974, the federal government collected a total of $264.9 billion in revenues from all sources while the total amount of revenues collected by all state and local governments was $253.8 billion as shown in Table 5. The level of both state and local revenues has more than doubled since FY 1967, while federal revenues have increased by about 75%. The percentage distributions by source of total governmental revenues are shown in Table 6. The federal share has declined from 57.5% in FY 1967 to 51.1% in Fy 1974. During the most recent four years, the split of governmental revenues has been approximately 50% federal, 25% state, and 25% local.

In fiscal year 1973-74, the state and local governments provided close to $19 billion of support to colleges and universities. These expenditures, as shown in Table 7, represented 9.5% of the total expenditures made by all state and local governments and about 25% of all state and local expenditures for education at all levels (elementary, secondary, and higher). The split between expenditures for operating purposes as opposed to capital purposes is also shown in Table 7 . In FY 1974, approximately 85% of the higher education expenditures were for operating expenses. Given the rapid expansion of higher education facilities during the mid 1960's and the anticipated slowdown in enrollment growth for the future, the percent of total expenditures for operating uses has increased significantly from the 73% in FY 1967. This trend is most likely to continue. The split of expenditures for higher education by state versus local governments is also shown in Table 7 . In FY 1974, approximately 82% of the combined expenditures were made by the

Table 5: Total Federal, State, and Local Revenues (billions)

Year	Federal Revenues	State Revenues	Local Revenues	Total
1967	$149.5	$ 52.5	$ 58.2	$260.2
1968	153.7	59.7	62.6	276.0
1969	187.8	67.9	71.3	327.0
1970	193.7	78.5	80.2	352.4
1971	188.4	86.0	91.1	365.5
1972	208.6	99.7	102.4	410.7
1973	232.2	114.4	117.1	463.7
1974	264.9	123.7	130.1	518.7

Table 6: Percentage Composition of All Governmental Revenues

Year	Federal	State	Local
1967	57.5	20.2	22.3
1968	55.7	21.6	22.7
1969	57.4	20.8	21.8
1970	55.0	22.3	22.7
1971	51.5	23.5	25.0
1972	50.8	24.3	24.9
1973	50.1	24.7	25.2
1974	51.1	23.8	25.1

Table 7 : State and Local Expenditures for Institutions of Higher Education

Year	State and Local Expenditures for Institutions of Higher Education	Percent of Education Expenditures	Percent of Total Expenditures	Percent Operating Expenditures	Percent State Expenditures
	(billions)				
1967	8.81	23.0	9.4	72.7	87.7
1968	10.21	24.8	10.0	74.8	88.0
1969	11.55	24.5	9.9	77.1	86.8
1970	12.92	24.5	9.8	79.1	85.5
1971	14.79	24.9	9.8	80.2	84.5
1972	15.95	24.8	9.6	81.5	84.1
1973	17.23	24.8	9.5	84.1	83.0
1974	18.88	24.9	9.5	85.1	81.8

state level governments. This 82% in FY 1974 compares to an 88% in FY 1967. This decline in the states share of higher education expenditures is most likely due to the increasing share of enrollment at public two-year colleges and to the decline in capital expenditures which were generally from the state level.

It is useful to look briefly at the uses of the state and local operating support provided to colleges and universities. As shown in Table 8, approximately 96.5% of the institutional revenues are for general use, 1.1% for sponsored research, and 2.4% for sponsored programs. This distribution is quite different than the way federal institutional support funds were distributed in FY 1974 as shown in Table 3. For the federal funds, 19.8% were for general use, 43.8% for sponsored research, and 36.4% for sponsored programs. For both federal, state and local institutional revenues, the percent allocated to general use has increased while the percent for sponsored research has declined. However, federal support for sponsored programs has been taking a larger portion over time, while state support for sponsored programs has been proportionally decreasing. In terms of the funding level for state and local higher education institutional support per "weighted full-time-equivalent" student, the support level has increased from $680 per student in FY 1967 to $1,090 per student in FY 1974.

In FY 1974, the total amount of general revenues at all colleges and universities in the country was $19.1 billion. These general revenues do not include sponsored research, other sponsored programs, or student aid revenues, but it does include all public and private general revenue sources. Of this total, 52.6% or $10.1 billion was provided to public four-year institutions, 20.3% or $3.9 billion to public two-year colleges, and 25.9% or

Table 8: State and Local Operating Support to Institutions of Higher Education

Year	Funding Level	Percent for: General Appropriations	Sponsored Research	Sponsored Programs	Funding Per WFTE
	($ billion)				
1967	3.68	90.2	4.7	3.4	680
1968	4.28	94.0	2.5	3.6	740
1969	5.36	94.9	2.1	3.1	800
1970	6.44	95.9	1.6	2.6	870
1971	7.52	96.8	1.1	2.0	930
1972	8.09	95.6	1.0	3.5	970
1973	9.25	96.2	1.2	2.6	1,140
1974	9.70	96.5	1.1	2.3	1,090

WFTE: Weighted FTE enrollment = full-time undergraduates plus one-third part-time undergraduates plus 3 times full-time graduate students plus part-time graduate students.

$5.0 billion to private four-year institutions.

The level of general revenues on a weighted FTE student basis have grown substantially during the 1967-1974 period. These trends are illustrated in Tables 9 through 12 for each of the institutional sectors and summarized below.

Sector	1967	1974	Percent Increase
Public four-year	$1,387	$2,272	64
Public two-year	1,191	1,569	32
Private four-year	1,510	2,386	58

To examine the level of expenditures by institution as a complement to the above revenue analysis, the sum of instruction and departmental research, libraries, and physical plant maintenance and operations is analyzed on a weighted FTE basis. The expenditure level is shown for 1967 through 1974 by sector in Tables 13 through 16 and illustrated for FY 1967 and FY 1974 below.

Sector	1967	1974	1974/1967
Public four-year	$1,165	$1,800	55%
Public two-year	792	1,073	35
Private four-year	1,149	1,727	50

It is interesting to note that the per student level of instruction and support expenditures is essentially the same on a weighted FTE basis for both public and private four-year colleges and universities.

As shown in Tables 17 through 20, the total share of institutional student aid from nonpublic sources has declined since 1967. This information is summarized below.

Table 9: General Revenue Sources for Public Four-Year Institutions

Year	General Revenues Per WFTE	Percent from: Tuition and Fees	Federal Government	State Government	Local Government	Endowment Income	Private Gifts
1967	$1,387	24.6	3.7	67.8	2.1	0.8	0.9
1968	1,492	24.5	3.0	70.2	0.8	1.1	0.9
1969	1,597	24.4	3.1	69.6	1.4	1.0	0.9
1970	1,703	24.4	3.2	68.9	2.0	0.9	0.8
1971	1,808	24.3	3.3	68.3	2.5	0.8	0.8
1972	1,899	25.2	3.6	67.2	2.4	0.8	0.9
1973	2,120	24.3	3.6	68.2	2.0	0.8	1.0
1974	2,272	24.4	3.7	67.9	2.0	1.2	1.0

Table 10: General Revenue Sources for Public Two-Year Institutions

Year	General Revenues Per WFTE	Percent from: Tuition and Fees	Federal Government	State Government	Local Government	Endowment Income	Private Gifts
1967	$1,191	25.8	4.1	45.8	23.2	0.8	0.3
1968	1,224	22.6	5.5	48.4	22.5	0.8	0.3
1969	1,291	22.8	5.3	50.0	21.0	0.7	0.3
1970	1,359	23.0	5.2	51.6	19.5	0.6	0.2
1971	1,426	23.1	5.1	53.2	18.0	0.4	0.2
1972	1,466	22.2	5.8	55.1	16.5	0.4	0.2
1973	1,666	20.7	6.1	56.9	15.8	0.4	0.2
1974	1,569	19.1	11.4	57.1	13.9	0.4	0.2

Table 11: General Revenue Sources for Private Four-Year Institutions

Year	General Revenues Per WFTE	Percent from: Tuition and Fees	Federal Government	State Government	Local Government	Endowment Income	Private Gifts
1967	$1,510	69.1	1.2	0.5	0.1	8.7	20.5
1968	1,610	69.3	2.4	0.4	0.1	8.1	19.7
1969	1,710	69.8	2.5	0.5	0.1	8.5	19.3
1970	1,810	70.2	2.7	0.5	0.1	8.8	19.0
1971	1,910	70.7	2.8	0.6	0.1	7.2	18.6
1972	2,060	71.2	2.8	0.9	0.1	6.8	18.3
1973	2,212	70.3	3.8	1.1	0.1	6.8	18.0
1974	2,386	70.3	4.5	1.0	0.1	7.2	17.0

Table 12: General Revenue Sources for Private Two-Year Institutions

Year	General Revenues Per WFTE	Percent from: Tuition and Fees	Federal Government	State Government	Local Government	Endowment Income	Private Gifts
1967	$1,381	66.1	2.3	0.6	0.5	2.5	27.2
1968	1,404	66.8	3.6	0.3	0.5	2.9	26.3
1969	1,427	67.7	3.3	0.5	0.5	3.0	25.2
1970	1,450	68.7	3.1	0.7	0.5	3.2	24.0
1971	1,473	69.6	2.9	0.9	0.5	3.4	22.9
1972	1,711	69.1	3.2	1.4	0.5	2.7	23.2
1973	1,711	69.9	2.8	1.2	0.5	2.3	23.4
1974	1,845	66.7	4.6	1.7	0.5	2.7	23.8

Table 13: Instruction and Support Expenditures at Public Four-Year

Year	Expenditures Per WFTE	Percent IDR	Percent Tuition Revenues
1967	$1,165	71.4	30.7
1968	1,239	71.9	30.9
1969	1,314	72.5	31.0
1970	1,389	73.1	31.1
1971	1,463	73.7	31.2
1972	1,509	72.9	32.8
1973	1,656	72.2	31.8
1974	1,800	71.8	31.3

Table 14: Instruction and Support Expenditures at Public Two-Year

Year	Expenditures Per WFTE	Percent IDR	Percent Tuition Revenues
1967	$ 792	76.5	34.2
1968	862	77.0	32.0
1969	932	76.7	30.9
1970	1,002	76.4	29.8
1971	1,073	76.1	28.7
1972	1,094	76.1	28.5
1973	1,234	75.7	27.0
1974	1,073	75.8	21.1

Table 15: Instruction and Support Expenditures at Private Four-Year

Year	Expenditures Per WFTE	Percent IDR	Percent Tuition Revenues
1967	$1,149	69.2	91.6
1968	1,216	69.2	94.6
1969	1,283	69.3	96.3
1970	1,351	69.4	98.0
1971	1,419	69.6	99.7
1972	1,531	70.6	100.8
1973	1,600	70.3	99.3
1974	1,727	69.3	101.4

Table 16: Instruction and Support Expenditures at Private Two-Year

Year	Expenditures Per WFTE	Percent IDR	Percent Tuition Revenues
1967	$ 933	66.3	102.3
1968	954	64.2	105.7
1969	976	64.8	105.9
1970	998	65.2	106.1
1971	1,019	65.5	106.3
1972	1,245	65.1	101.1
1973	1,161	66.1	107.1
1974	1,092	65.1	111.9

Table 17: Student Aid Revenues at Public Four-Year Institutions

Year	Revenues Per WFTE	Percent from: Endowment Income	Private Gifts	Other Private Sources
1967	65	5.3	24.5	5.1
1968	70	3.7	19.0	2.3
1969	75	4.0	19.3	2.3
1970	81	4.4	19.7	2.4
1971	87	4.7	20.0	2.4
1972	93	4.2	20.6	2.4
1973	93	5.8	22.6	1.9
1974	103	4.3	21.7	3.0

Table 18: Student Aid Revenues at Public Two-Year Institutions

Year	Revenues Per WFTE	Percent from: Endowment Income	Private Gifts	Other Private Sources
1967	21.2	0.1	40.9	13.6
1968	25.7	0.1	23.0	6.3
1969	30.4	0.1	19.0	5.2
1970	35.2	0.1	15.0	4.1
1971	40.2	0.1	12.0	3.0
1972	43.9	0.1	10.0	4.7
1973	52.5	0.1	13.5	2.4
1974	65.5	0.1	11.6	2.6

Table 19: Student Aid Revenues at Private Four-Year Institutions

Year	Revenues Per WFTE	Percent from: Endowment Income	Private Gifts	Other Private Sources
1967	127	16.0	38.1	7.1
1968	130	13.9	30.1	5.2
1969	134	14.0	27.8	6.2
1970	139	14.1	25.5	7.2
1971	143	14.2	23.3	8.2
1972	181	13.4	25.6	6.8
1973	159	15.7	26.1	4.0
1974	188	15.6	24.0	6.0

Table 20: Student Aid Revenues at Private Two-Year Institutions

Year	Revenues Per WFTE	Percent from: Endowment Income	Private Gifts	Other Private Sources
1967	64.9	12.3	62.2	21.4
1968	69.5	7.6	35.3	12.8
1969	74.2	7.0	31.8	12.5
1970	79.0	6.4	28.3	12.2
1971	83.8	5.8	24.9	11.9
1972	131.2	3.7	24.5	12.1
1973	121.2	3.0	28.5	9.1
1974	156.3	3.0	18.1	9.4

Table 21: Student Financing

Year	Average Tuition	Average Resident Budget	Average Institutional Aid	Average State Aid	Average Federal Aid	Average Net Budget
1968	560	1,619	53	---	166	1,400
1969	585	1,817	56	---	208	1,553
1970	615	1,923	59	---	246	1,618
1971	645	2,029	62	18	284	1,665
1972	703	2,154	68	22	307	1,757
1973	761	2,279	73	26	301	1,879
1974	767	2,444	73	31	295	2,045
1975	807	2,525	73	40	405	2,007

Table 22: Student Financing Relative to 1968

Year	Average Tuition	Average Resident Budget	Average Institutional Aid	Average State Aid	Average Federal Aid	Average Net Aid
1968	1.00	1.00	1.00	---	1.00	1.00
1969	1.05	1.13	1.13	---	1.25	1.11
1970	1.10	1.20	1.26	---	1.50	1.16
1971	1.15	1.27	1.39	---	1.75	1.19
1972	1.27	1.34	1.76	---	1.91	1.26
1973	1.38	1.42	1.95	---	1.87	1.34
1974	1.37	1.52	1.59	---	1.82	1.46
1975	1.43	1.58	1.59	---	2.51	1.43

Institutional Category	1967	1974	1974/1967
Public four-year	34.9	29.0	0.83
Public two-year	54.6	14.3	0.26
Private four-year	61.2	45.6	0.75

For perspective, average student financing variables over all institutional categories and all states are shown in Table 21 for FY 1968-FY 1975. During this seven year period, the average student budget net of student aid (federal, state, and nonpublic institutional) increased by $600 per student from $1,400 in FY 1968 to $2,000 in FY 1975. Proportional changes in each of the student budget variables relative to FY 1968 are shown in Table 22. The average tuition increased by 43% while the average resident budget increased by 58%. This difference indicates that the cost of living for a student plus books and supplies increased more rapidly than the average level of tuition. It should be noted that the slower growth in the average tuition might also reflect the shift over these eight years to a much larger share of total enrollment at public two-year colleges and a smaller share at the public and private four-year institutions.

As described at the beginning of this report the amount of federal student aid has increased tremendously since FY 1967. As shown in Table 21, the average amount of aid per student (FTE undergraduate) has increased from $166 in FY 1968 to $405 in FY 1975. Although this growth is phenomenal on a percentage basis, when the aid is combined with the average student budget it has only reduced the percentage increase in net student budget by a few percentage points. The effect of the student aid (including both state and institutional sources) has been significant in terms of reducing the net budget increase from 1.58 to 1.43 but that reduction is small relative to the increase in student aid funds. Starting from a small base,

the amount of federal student aid now amounts to about 16% of the aggregate amount of all tuition, living, and other attendance costs paid by undergraduate students.

Another way to examine these student financing trends is to adjust the costs for inflation. The approach used here is to divide the costs by average weekly earnings. The latter is an annually available statistic by state and the resulting number has an interesting interpretation. The ratio, budget divided by earnings, indicates the number of week's salary for the average worker required to send one person to college for a year. For each of the student financing variables, the ratios with average weekly earnings are given in Table 23. In 1975 the average resident budget was 15.0 times the average weekly earnings which was slightly less than the ratio during the past six years. This trend suggests that the average resident budget actually grew slightly less rapidly than average earnings. However, this behavior must be modified by the fact that the mix of enrollment at public two-year colleges (the least expensive) increased significantly in relation to the public four-year and the private four-year (the most expensive). Because of the increases in federal and state student aid, the average net budget relative to average weekly earnings at 12.0 is at the lowest level since 1968. Therefore, on the average the burden of attending college has actually declined slightly during the past eight years. Underlying this average a lot of things have happened. Since the aid is targetted to low income it is most likely that either the financial burden of that group declined the most or that a larger proportion of enrollment is now from the lower income sectors of the population than in 1968.

The student financing variables divided by average weekly earnings relative to the 1968 basis is shown in Table 24. Tuition divided by earnings

Table 23 : Student Financing Relative to Average Weekly Earnings

Year	Average Tuition	Average Resident Budget	Average Institutional Aid	Average State Aid	Average Federal Aid	Average Net Budget
1968	5.1	14.6	0.43	—	1.5	12.6
1969	5.0	15.5	0.48	—	1.8	13.2
1970	5.0	15.7	0.49	—	2.0	13.2
1971	5.0	15.8	0.49	0.13	2.2	13.0
1972	5.1	15.6	0.49	0.15	2.2	12.8
1973	5.2	15.4	0.49	0.16	2.0	12.8
1974	4.9	15.5	0.46	0.18	1.9	13.0
1975	4.8	15.0	0.46	0.22	2.4	11.9

Table 24 : Student Financing Relative to Average Weekly Earnings from the 1968 Base

Year	Average Tuition	Average Resident Budget	Average Institutional Aid	Average State Aid	Average Federal Aid	Average Net Aid
1968	1.00	1.00	1.00	—	1.00	1.00
1969	0.98	1.06	1.06	—	1.17	1.05
1970	0.98	1.08	1.12	—	1.34	1.05
1971	0.98	1.09	1.19	—	1.51	1.03
1972	1.01	1.07	1.41	—	1.54	1.02
1973	1.03	1.06	1.51	—	1.40	1.02
1974	0.96	1.07	1.12	—	1.28	1.03
1975	0.93	1.03	1.12	—	1.62	0.94

in 1975 is 93% of the 1968 level. The average student budget relative to earnings is 103% of the 1968 level and the average net budget is at a level 94% of the 1968 ratio. For 26 states the average net budget to earnings ratio was smaller in 1975 than in 1968. The range of these ratios is quite wide which indicates that for many states the financial burden for the average student has been increasing swbstantially while for other states fairly significant reductions in the net budget burden have occurred.

Enrollment rates by either of the two definitions actually declined in recent years for men and leveled off for women. As shown in Table 25, the ratio of FTE undergraduates divided by the 18-20 year-old populationfor men reached a peak of 0.62 for 1969 through 1972 and then declined by 11% to 0.55 in 1975. The same ratio for women has increased steadily through 1975. In 1967 the ratio of the enrollment rate for men to women was 1.47 (0.50/0.34). By 1975 the ratio had dropped to 1.20 (0.55/0.46).

Also shown in Table 25 are the enrollment ratios calculated by dividing the first-time, full-time enrollment by the number of high school graduates. For men, a peak of 0.64 was reached for this ratio in 1970 and by 1974 the ratio had dropped to 0.61. This decline is slightly less than the decline in the population based enrollment ratio which reflects the fact that high school graduation ratios have also been declining in recent years for men. The trend for women on the basis of this high school graduate based enrollment rate is similar to that for men.

The enrollment distribution across categories of institutions has changed significantly during the past eight years. These enrollment shifts are reflected in the population based enrollment rates shown for men in Table 26 and for women in Table 27 . For men the public four-year enrollment rate is the same in 1975 as it was in 1967 at a value of 0.30 while the public

Table 25 Enrollment Rate Trends for Men and Women

	Resident FTE Undergraduates Divided by the 18-20 Year-Old Population		Resident First-Time, Full-Time Enrollment Divided by the Number of High School Graduates	
Year	Men	Women	Men	Women
1967	0.30	0.34	0.51	0.40
1968	0.36	0.38	0.56	0.43
1969	0.62	0.41	0.61	0.47
1970	0.62	0.43	0.64	0.48
1971	0.62	0.45	0.63	0.49
1972	0.62	0.47	0.62	0.50
1973	0.58	0.48	0.60	0.51
1974	0.58	0.47	0.61	0.48
1975	0.55	0.46	—	—

Table 26: Enrollment Rates for Men by Type of Institution

Year	FTE Undergraduates Divided by 18-20 Year-Old Population			
	Public Four	Public Two	Private Four	Private Two
1967	0.30	0.07	0.12	0.01
1968	0.33	0.09	0.13	0.01
1969	0.36	0.11	0.13	0.01
1970	0.36	0.12	0.13	0.01
1971	0.36	0.12	0.13	0.01
1972	0.35	0.13	0.12	0.01
1973	0.33	0.13	0.11	0.01
1974	0.32	0.13	0.11	0.01
1975	0.30	0.13	0.11	0.01

Table 27: Enrollment Rates for Women by Type of Institution

Year	FTE Undergraduates Divided by 18-20 Year-Old Population			
	Public Four	Public Two	Private Four	Private Two
1967	0.20	0.04	0.09	0.01
1968	0.22	0.05	0.09	0.01
1969	0.24	0.06	0.10	0.02
1970	0.25	0.06	0.09	0.02
1971	0.26	0.08	0.10	0.02
1972	0.27	0.09	0.10	0.02
1973	0.26	0.09	0.10	0.02
1974	0.26	0.10	0.08	0.02
1975	0.25	0.10	0.08	0.02

two-year rate has increased by 86% from 0.07 in 1967 to 0.13 in 1975 and and the private four-year rate has actually declined by 8% from 0.12 in 1967 to 0.11 in 1975. Taking 1971 as the total enrollment peak, the public four-year rate has declined by 17%, the public two-year rate has increased by 8%, and the private four-year rate has declined by 15% by 1975. For women as shown in Table 27, the public four-year enrollment rate has increased from 0.20 in 1967 to 0.25 in 1975, the public two-year rate has increased from 0.04 to 0.10, and the private four-year rate has actually declined from 0.09 in 1967 to 0.08 in 1975.

V. STATE SOCIO-ECONOMIC-HIGHER EDUCATION ENVIRONMENTS

Participation in educational activities beyond high school is likely to be influenced to a significant degree by a variety of demographic, social, and economic factors. The motivations, aspirations, and career choices of young adults are often determined by the social environment in which they spend their childhood. Without attempting to develop a complex model of lifestyle and career choice formation for young adults, several very crude measures are useful for contrasting the socio-economic environments across the fifty-one states. Table 28 illustrates the diversity across states for several measures for FY 1974.

The availability and types of educational activities beyond high school are determined by the institutions of higher education located in each state. Not all states have public two-year colleges and not all states have private research universities. Several characteristics of the higher education systems in terms of the mix of institutions for each state are illustrated in Table 29.

Table 28: Socio-Economic Characteristics

State	Population Growth Factor: 1967-1975	Percent of Families with Income Under $6,000: 1972	Percent Nonwhite Population: 1975	Percent Living in Metropolitan areas: 1975	Percent Completed One Year of College: 1974	Unemployment Rate: 1975	Percent Employed in Government and Services	High School Graduate Growth Factor: 1970-1974	High School Graduates Relative to the Population: 1974
Alabama	1.01	47	33	66	17	5.5	34	1.07	.73
Alaska	1.22	35	27	63	31	10.5	51	1.35	.54
Arizona	1.40	42	11	76	28	5.6	39	1.18	.66
Arkansas	1.06	52	25	42	15	4.8	32	1.01	.74
California	1.22	39	12	95	32	7.3	40	1.06	.73
Colorado	1.46	44	4	74	31	3.9	40	1.18	.71
Connecticut	1.21	36	7	90	26	6.1	30	1.02	.79
Delaware	1.37	39	16	71	24	6.1	32	1.14	.76
District of Columbia	1.25	40	89	100	30	4.4	76	0.89	.41
Florida	1.47	44	20	91	23	6.3	38	1.13	.60
Georgia	1.10	46	31	61	20	5.1	33	1.09	.66
Hawaii	1.09	46	67	83	29	7.6	45	1.03	.63
Idaho	1.25	46	2	16	27	6.1	40	1.13	.87
Illinois	1.20	36	16	83	22	4.5	31	1.02	.75
Indiana	1.25	39	8	66	18	5.2	28	1.07	.78
Iowa	1.15	41	2	38	21	3.0	36	0.97	.92
Kansas	1.18	43	6	45	26	3.6	37	1.03	.79
Kentucky	1.04	44	8	32	16	4.5	34	1.08	.71
Louisiana	1.12	44	35	65	19	6.1	36	1.04	.68
Maine	1.13	48	1	23	21	6.7	36	0.94	.82
Maryland	1.19	36	21	87	26	4.7	40	1.13	.75
Massachusetts	1.30	38	4	84	25	7.2	36	1.07	.77
Michigan	1.27	34	13	86	20	8.5	33	1.08	.82
Minnesota	1.30	44	2	69	25	4.3	36	1.06	.92
Mississippi	0.97	48	45	22	19	4.1	33	0.93	.61
Missouri	1.23	42	13	67	19	4.8	34	1.09	.76
Montana	1.13	43	6	25	27	6.7	43	1.07	.96
Nebraska	1.24	42	4	45	23	3.8	38	1.02	.82
Nevada	1.50	41	9	83	28	7.6	57	1.34	.75
New Hampshire	1.29	41	1	38	25	3.6	32	0.99	.77

(table continued)

Table 28 (continued)

State	Population Growth Factor: 1967-1975	Percent of Families with Income Under $6,000: 1972	Percent Nonwhite Population: 1975	Percent Living in Metropolitan areas: 1975	Percent Completed One Year of College: 1974	Unemployment Rate: 1975	Percent Employed in Government and Services	High School Graduate Growth Factor: 1970-1974	High School Graduates Relative to the Population: 1974
New Jersey	1.08	37	13	96	22	6.3	33	1.05	.37
New Mexico	1.23	50	11	35	26	6.3	46	1.14	.83
New York	1.15	37	14	90	23	6.4	39	0.99	.73
North Carolina	1.08	47	30	50	18	4.5	27	1.10	.69
North Dakota	1.08	49	3	12	25	5.0	47	0.97	.90
Ohio	1.20	38	11	82	19	4.8	31	1.06	.82
Oklahoma	1.14	46	14	59	23	4.4	38	1.10	.79
Oregon	1.26	42	3	62	27	7.5	22	1.01	.80
Pennsylvania	1.14	39	10	82	17	5.1	32	0.97	.84
Rhode Island	0.98	43	3	94	19	7.3	33	0.98	.70
South Carolina	1.03	48	39	48	18	5.9	30	1.21	.72
South Dakota	1.19	52	6	15	24	3.5	49	1.05	.92
Tennessee	1.09	48	20	65	17	5.1	31	1.07	.71
Texas	1.23	47	15	80	24	4.3	35	1.20	.72
Utah	1.47	42	3	82	33	6.0	42	1.12	.76
Vermont	1.32	46	0	0	27	7.0	39	0.90	.73
Virginia	1.11	42	23	71	24	4.5	38	1.13	.69
Washington	1.15	38	5	77	29	7.7	40	1.08	.84
West Virginia	0.91	42	5	41	15	5.9	32	1.05	.91
Wisconsin	1.32	40	4	82	21	4.5	33	0.98	.86
Wyoming	1.28	45	3	0	28	3.6	39	1.15	.87
National	1.20	43	15	61	23	5.6	37	1.04	.75

See Appendix A for data sources.

Table 29 : Higher Education Institutional Environments

State	Number of Public Institutions, FY 1973	Number of Private Institutions, FY 1973	18-20 Year-Old Population Per Institution, FY 1973	Percent of FTE Undergraduates at Public Four-Year, FY 1975	Percent of FTE Undergraduates at Public Two-Year, FY 1975	Percent of FTE Undergraduates at Private Four-Year, FY 1975	Average Cost of Attendance at Public Four-Year, FY 1975	Average Cost of Attendance at Private Four-Year, FY 1975
Alabama	30	21	3,961	39	26	13	2,231	3,009
Alaska	1	5	4,000	43	48	6	3,130	4,880
Arizona	14	6	5,900	54	42	4	2,090	3,317
Arkansas	8	11	5,379	74	8	17	2,100	2,660
California	114	102	5,546	32	59	9	2,660	4,484
Colorado	21	11	4,938	71	19	10	2,353	4,619
Connecticut	20	26	3,521	33	26	34	2,554	4,807
Delaware	3	4	5,000	71	14	2	2,289	3,798
District of Columbia	3	17	2,200	24	0	73	—	4,315
Florida	36	28	6,078	36	46	17	2,586	4,254
Georgia	29	12	4,689	59	21	18	2,371	3,844
Hawaii	8	5	4,462	54	38	8	2,629	3,294
Idaho	6	3	5,222	66	9	6	2,227	3,560
Illinois	50	88	4,384	41	33	24	2,570	4,426
Indiana	6	38	6,977	65	5	29	2,530	3,836
Iowa	18	36	2,838	42	24	31	2,194	3,794
Kansas	28	24	2,692	64	22	13	2,451	3,209
Kentucky	8	28	5,278	70	12	16	2,065	3,316
Louisiana	12	11	9,652	81	7	12	1,834	3,908
Maine	4	13	3,412	60	8	31	2,382	4,607
Maryland	25	23	4,917	57	31	11	2,726	4,702
Massachusetts	30	88	2,797	31	15	49	2,374	4,858
Michigan	42	43	3,793	53	32	14	2,575	3,743
Minnesota	26	31	4,018	58	17	24	2,688	3,777
Mississippi	24	17	3,341	54	36	9	2,106	2,804
Missouri	22	48	3,771	56	18	25	2,118	4,253
Montana	9	3	3,417	85	6	9	2,224	2,897
Nebraska	13	14	3,296	65	13	21	2,333	3,273
Nevada	3	1	4,667	53	46	1	2,190	—
New Hampshire	4	15	2,211	49	8	39	2,581	4,692

(table continued)

Table 29 (continued)

State	Number of Public Institutions, FY 1973	Number of Private Institutions, FY 1973	15-20 Year-Old Population Per Institution, FY 1973	Percent of FTE Undergraduates at Public Four-Year, FY 1975	Percent of FTE Undergraduates at Public Two-Year, FY 1975	Percent of FTE Undergraduates at Private Four-Year, FY 1975	Average Cost of Attendance at Public Four-Year, FY 1975	Average Cost of Attendance at Private Four-Year FY 1975
New Jersey	25	33	6,259	30	26	21	2,887	4,217
New Mexico	8	3	6,273	82	10	8	2,362	3,988
New York	79	146	4,133	35	30	32	?	4,786
North Carolina	68	45	2,912	45	29	21	2,044	3,696
North Dakota	9	3	3,250	69	25	5	1,872	3,086
Ohio	32	69	6,089	56	18	23	2,767	4,862
Oklahoma	26	14	3,825	63	21	14	1,981	2,934
Oregon	20	20	3,173	48	40	11	2,396	3,686
Pennsylvania	31	115	4,322	41	19	39	2,720	4,333
Rhode Island	3	10	4,385	37	10	53	2,552	4,446
South Carolina	22	24	3,804	45	29	22	2,286	3,511
South Dakota	6	10	2,625	74	0	24	2,151	3,479
Tennessee	19	43	3,645	59	12	26	2,067	3,496
Texas	77	55	5,379	54	31	14	2,339	3,684
Utah	9	4	6,231	51	12	36	2,342	2,150
Vermont	5	13	1,611	48	5	41	2,949	4,271
Virginia	36	33	4,362	63	17	19	2,353	3,757
Washington	31	12	4,651	40	48	12	2,307	3,927
West Virginia	14	10	3,917	72	10	16	2,215	3,387
Wisconsin	28	30	4,534	59	27	14	2,483	3,976
Wyoming	8	0	2,750	59	41	0	2,300	—

See Appendices B and C for data sources.

VI. STATE VARIATIONS IN FINANCIAL BURDEN

To illustrate the diversity of higher education financing systems across the fifty-one states, Table 30 gives for each institutional sector in every state the average per student amount for each component of the expanded net student budget equation. An examination of Table 30 makes clear the significant variations in financing patterns across states. The remainder of this section will relate each of these net student budget components to other state demographic and financing variables. Summary statistics will be presented to provide an initial explanation of factors related to each of these components which in turn partly determine the magnitude of the financial burden associated with attending postsecondary education institutions.

(1) Expenditures per student: As shown in Table 31 for all three institutional sectors, states with higher levels of instruction and support expenditures per students also have larger amounts of student aid revenues per student and a greater percentage of general revenues from tuition and fees. The insignificant correlation coefficients for the percentage low income population variable indicates that the lower income states are not on the average spending less per student than the "wealthier" states. For the public two-year sector, states with great percentages of nonwhite population tend to have lower institutional expenditures per student.

(2) Institutional revenue mix: The correlation coefficients for the percentage composition of general revenues by source and various state demographic variables are given in Tables 32-34 for the three categories of institutions. Based on the correlations in Table 32 for public four-year institutions, the following statements are may be made:

Table30: Expanded Calculation of Net Student Budgets

		Expenditure Per WFTE	Federal Support	State and Local Support	Private Support	Tuition	Living and Other Expenses	Federal Aid	State Aid	Institutional Aid	Net Budget	Percent Low Income	Average Weekly Earnings	Net Budget Earnings	Percent of Enrollment
Alabama	Public Four	2,005	26	1,440	34	505	1,746	220	0	11	2,020	44	152	13.29	59
	Public Two	1,058	221	616	13	208	1,625	168	0	4	1,661			10.93	26
	Private Four	1,967	104	10	611	1,242	1,758	647	0	93	2,260			14.87	13
Alaska	Public Four					470	2,680	76	0	0	3,074	53	267	11.51	43
	Public Two														48
	Private Four					2,150	2,730	498			4,382			16.41	6
Arizona	Public Four	2,154	71	1,604	159	320	1,680	169	0	30	1,801	40	172	10.47	54
	Public Two	1,089	79	926	0	121	1,995	128	0	10	1,978			11.50	42
	Private Four	1,782	0	0	193	1,589	1,728	61	0	102	3,154			18.34	4
Arkansas	Public Four	2,474	430	1,784	0	400	1,700	264	0	32	1,804	53	129	13.98	74
	Public Two	1,066	107	729	0	257	1,598	143	0	12	1,700			13.18	8
	Private Four	3,413	375	0	1,820	1,218	1,442	405	0	148	2,107			16.33	17
California	Public Four	2,064	62	1,634	54	314	2,346	201	25	17	2,417	38	188	12.86	32
	Public Two	1,319	113	1,149	37	20	2,299	96	11	1	2,211			11.76	59
	Private Four	2,959	178	0	301	2,480	2,204	218	179	184	4,103			21.82	9
Colorado	Public Four	1,681	54	967	92	568	1,785	550	79	40	1,684	44	175	9.62	71
	Public Two	1,171	35	888	14	234	1,266	260	175	15	1,050			6.00	19
	Private Four	2,675	8	0	64	2,603	2,016	331	0	215	4,073			23.27	10
Connecticut	Public Four	2,131	139	1,624	0	617	1,937	467	12	29	2,046	35	183	11.18	38
	Public Two	1,598	74	1,278	0	281	1,838	288	21	4	1,806			9.87	26
	Private Four	3,253	234	7	297	2,715	2,092	505	39	424	3,839			20.98	34
Delaware	Public Four	2,752	124	1,367	756	505	1,784	203	1	24	2,061	43	183	11.26	71
	Public Two	1,820	0	1,534	286	0	1,695	104	5	0	1,586			8.67	14
	Private Four	0	0	0	0		0	654		0				--	2
District of Columbia	Public Four											35	199	--	24
	Public Two													--	0
	Private Four					2,309	2,206	100	0	35	4,380			22.01	75
Florida	Public Four	2,807	59	2,260	0	576	2,010	264	27	45	2,250	42	150	15.00	36
	Public Two	1,506	93	1,098	23	292	1,746	172	17	13	1,836			12.24	46
	Private Four	2,328	30	79	0	2,231	2,023	406	49	79	3,720			24.80	17
Georgia	Public Four	2,314	90	1,747	9	468	1,903	160	8	14	2,189	43	141	15.52	59
	Public Two	1,469	35	1,108	7	319	1,538	164	20	1	1,672			11.86	21
	Private Four	2,421	109	15	310	1,987	1,857	482	12	167	3,183			22.57	18
Hawaii	Public Four	1,698	78	1,297	0	337	2,292	148	0	28	2,453	48	167	14.69	54
	Public Two	699	6	647	0	50	1,707	108	0	1	1,648			9.87	38
	Private Four	2,159	114	0	765	1,280	2,014	310	0	20	2,964			17.75	8

(table continued)

Table 30- continued

		Revenues Per WFTE	Federal Support	State and Local Support	Private Support	Tuition	Living and Other Expenses	Federal Aid	State Aid	Institutional Aid	Net Budget	Percent Low Income	Average Weekly Earnings	Net Budget Earnings	Percent of Enrollment
Idaho	Public Four	1,691	19	1,388	0	395	1,832	171	1	74	1,981	40	171	11.58	66
	Public Two	1,931	100	1,558	0	340	1,840	291	6	36	1,847			10.80	9
	Private Four	2,056	0	0	207	1,849	1,711	604	3	256	2,697			15.77	6
Illinois	Public Four	2,697	102	2,115	0	608	1,962	538	130	85	1,817	35	198	9.18	41
	Public Two	1,630	112	1,291	0	352	2,573	268	147	2	2,508			12.67	33
	Private Four	2,460	116	91	0	2,351	2,075	438	281	139	3,568			18.02	24
Indiana	Public Four	2,603	138	1,731	36	698	1,832	267	41	64	2,158	37	205	10.53	65
	Public Two	3,871	650	2,272	398	551	2,968	118	435	14	2,952			14.40	5
	Private Four	2,164	13	0	0	2,190	1,696	367	130	161	3,228			15.75	29
Iowa	Public Four	2,574	82	1,951	0	608	1,586	197	3	52	1,942	38	199	9.76	42
	Public Two	2,129	513	1,162	0	482	1,750	164	4	13	2,051			10.31	24
	Private Four	2,478	151	0	170	2,157	1,637	541	166	139	2,948			14.81	31
Kansas	Public Four	1,739	134	1,171	0	538	1,915	196	5	15	2,237	42	173	12.93	64
	Public Two	2,132	759	1,104	0	338	1,721	218	14	15	1,812			10.47	22
	Private Four	2,602	190	0	831	1,581	1,628	607	254	187	2,161			12.49	13
Kentucky	Public Four	2,881	193	2,087	52	549	1,516	214	3	12	1,836	41	171	10.74	70
	Public Two	403	143	0	260			4	13	8				—	12
	Private Four	1,987	79	0	521	1,387	1,629	419	10	166	2,421			14.16	16
Louisiana	Public Four	1,505	173	983	0	362	1,472	216	0	7	1,611	40	176	9.15	81
	Public Two	1,783	105	1,491	187			155	0	3				—	7
	Private Four	2,307	173	35	52	2,047	1,861	307	0	115	3,486			19.81	12
Maine	Public Four	4,847	359	2,816	1,123	549	1,833	328	2	0	2,052	46	141	14.55	60
	Public Two					322	1,515	146	0	0	1,691			11.99	8
	Private Four	3,034	21	0	0	3,023	1,584	913	38	324	3,332			23.63	31
Maryland	Public Four	2,570	177	1,591	79	723	2,003	265	0	50	2,411	34	184	13.10	57
	Public Two	1,569	105	1,087		454	2,113	107	0	5	2,455			13.34	31
	Private Four	2,718	160	24	11	2,523	2,179	221	13	249	4,219			22.93	11
Massachusetts	Public Four	1,416	21	1,121	0	491	1,883	238	29	10	2,097	36	166	12.63	31
	Public Two	1,005	81	745	0	390	1,872	149	42	6	2,065			12.44	15
	Private Four	2,772	11	0	126	2,635	2,223	315	40	253	4,250			25.60	49
Michigan	Public Four	2,115	15	1,478	0	637	1,938	161	0	29	2,385	32	232	10.28	93
	Public Two	1,249	60	897	0	375	1,857	134	0	8	2,090			9.01	32
	Private Four	1,935	27	15	123	1,770	1,973	258	379	65	3,041			13.11	14
Minnesota	Public Four	2,311	134	1,521	6	650	2,038	336	49	93	2,210	41	186	11.88	58
	Public Two	1,158	0	850	0	475	1,788	534	120	9	1,600			8.60	17
	Private Four	2,527	71	40	287	2,129	1,648	538	93	203	2,943			15.82	24
Mississippi	Public Four	2,607	399	1,676	38	494	1,612	330	0	25	1,751	44	125	14.01	54
	Public Two	1,278	299	833	0	243	1,107	188	0	6	1,156			9.25	36
	Private Four	1,782	2	0	492	1,288	1,516	487	0	118	2,199			17.39	9

(table continued)

Table 30- continued

		Revenues Per WFTE	Federal Support	State and Local Support	Private Support	Tuition	Living and Other Expenses	Federal Aid	State Aid	Institutional Aid	Net Budget	Percent Low Income	Average Weekly Earnings	Net Budget Earnings	Percent of Enrollment
Missouri	Public Four	2,151	92	1,596	45	418	1,700	157	10	25	1,926	40	185	10.41	56
	Public Two	1,500	300	870	110	220	1,550	151	29	5	1,585			8.57	18
	Private Four	2,402	159	10	0	2,236	2,017	1,706	54	124	2,369			12.81	25
Montana	Public Four	2,054	249	1,399	0	474	1,750	277	0	58	1,889	41	189	9.99	85
	Public Two	1,424	389	863	0	208	1,366	504	0	25	1,045			5.53	6
	Private Four	2,163	366	6	402	1,389	1,508	836	0	170	1,891			10.01	9
Nebraska	Public Four	2,281	297	1,404	0	611	1,722	252	7	23	2,051	37	167	12.28	65
	Public Two	2,045	168	1,673	0	286	1,388	117	25	8	1,524			9.13	13
	Private Four	2,516	470	0	370	1,676	1,597	413	0	77	2,783			16.66	21
Nevada	Public Four	2,717	258	1,560	899			248	0	65		43	190	--	53
	Public Two													--	46
	Private Four							316	0	0				--	1
New Hampshire	Public Four	2,279	128	966	290	895	1,686	282	0	55	2,244	38	142	15.80	49
	Public Two	1,984	179	1,518	0	314	1,783	48	0	2	2,047			14.42	8
	Private Four	3,367	34	0	673	2,660	2,032	311	0	243	4,138			29.14	39
New Jersey	Public Four	4,050	89	2,852	432	677	2,210	362	155	13	2,357	35	187	12.60	50
	Public Two	1,457	38	1,039	380			349	319	8				--	26
	Private Four	2,527	66	119	58	2,284	1,933	445	165	205	3,402			18.19	21
New Mexico	Public Four	1,751	133	1,303	0	456	1,906	359	0	30	1,973	49	127	15.54	82
	Public Two	1,753	181	852	462	258	1,797	371	0	25	1,659			13.06	10
	Private Four	1,843	337	4	21	1,481	2,507	778	0	44	3,166			24.93	8
New York	Public Four					496	1,385	506	191	0	1,184	35	178	6.65	35
	Public Two	1,906	80	1,260	94	472	1,515	216	155	3	1,613			9.06	30
	Private Four	2,892	67	211	10	2,604	2,182	332	161	193	4,100			23.03	32
North Carolina	Public Four	2,638	261	1,836	72	469	1,575	1,057	0	48	939	45	128	7.34	45
	Public Two	1,685	192	1,388	0	296	1,421	49	0	11	1,657			12.95	29
	Private Four	2,470	42	27	448	1,953	1,743	289	0	152	3,255			25.43	21
North Dakota	Public Four	1,745	164	1,112	50	419	1,453	531	12	31	1,298	46	154	8.43	69
	Public Two	1,026	144	601	0	479	1,501	281	18	24	1,657			10.76	25
	Private Four	2,111	91	0	553	1,467	1,619	1,508	17	205	1,356			8.81	5
Ohio	Public Four	2,100	84	1,164	65	787	1,980	166	46	25	2,530	36	211	11.99	56
	Public Two	1,420	89	866	19	446	1,791	61	93	7	2,076			9.84	18
	Private Four	2,398	46	43	27	2,282	1,780	380	75	150	3,457			16.38	25
Oklahoma	Public Four	1,375	7	912	0	478	1,503	188	3	18	1,772	45	161	11.01	63
	Public Two	1,150	148	730	0	279	1,510	259	8	20	1,502			9.33	21
	Private Four	1,978	34	0	692	1,252	1,682	223	18	104	2,589			16.08	14
Oregon	Public Four	1,929	116	1,248	30	535	2,061	219	33	39	2,305	40	194	11.88	48
	Public Two	1,203	109	883	0	1,546	1,874	147	23	11	3,239			16.70	40
	Private Four	2,313	148	65	175	1,925	1,761	265	25	115	3,281			16.91	11

(table continued)

Table 30 - continued

		Revenues Per WFTE	Federal Support	State and Local Support	Private Support	Tuition	Living and Other Expenses	Federal Aid	State Aid	Institutional Aid	Net Budget	Percent Low Income	Average Weekly Earnings	Net Budget Earnings	Percent of Enrollment
Pennsylvania	Public Four	2,587	93	1,534	41	919	1,801	447	0	20	2,253	38	180	12.52	41
	Public Two	1,728	195	945	0	738	1,712	188	0	11	2,251			12.51	19
	Private Four	2,412	140	113	0	2,404	1,929	469	244	108	3,512			19.51	39
Rhode Island	Public Four	1,876	0	1,435	0	695	1,857	377	34	19	2,122	40	142	14.94	37
	Public Two	1,653	36	1,393	224			40	120	0				--	10
	Private Four	2,499	20	17	123	2,339	2,107	412	55	175	3,804			26.79	53
South Carolina	Public Four	2,367	19	2,007	0	596	1,690	109	0	31	2,146	43	132	16.26	45
	Public Two	1,307	178	846	0	301	1,485	140	0	5	1,641			12.43	29
	Private Four	2,460	226	2	451	1,781	1,730	346	254	121	2,790			21.14	22
South Dakota	Public Four	1,915	214	1,147		612	1,539	462	4	23	1,662	49	157	10.59	74
	Public Two													--	0
	Private Four	2,044	35	0	120	1,889	1,590	883	19	102	2,475			15.76	24
Tennessee	Public Four	2,084	181	1,416	88	399	1,668	150	0	20	1,897	47	135	14.05	59
	Public Two	1,898	296	1,338	58	206	1,565	75	0	3	1,693			12.54	12
	Private Four	2,551	189	10	557	1,795	1,701	392	93	134	2,877			21.31	26
Texas	Public Four	2,389	616	1,515	0	328	2,011	191	0	31	2,117	46	166	12.75	54
	Public Two	1,515	239	1,042	0	491	1,688	114	0	13	2,052			12.36	31
	Private Four	2,434	105	136	379	1,814	1,870	486	83	199	2,916			17.57	14
Utah	Public Four	2,093	105	1,365	148	475	1,867	170	0	46	2,126	38	155	13.72	51
	Public Two	1,003	184	653		327	1,791	123	0	27	1,968			12.70	12
	Private Four	1,962	35	0	1,327	600	1,550	9	0	85	2,056			13.26	36
Vermont	Public Four	2,625	137	1,004	431	1,053	1,896	323	121	57	2,448	45	155	15.79	48
	Public Two	4,432	0	3,355	1,077			199	1,389	0				--	5
	Private Four	2,960	38	3	536	2,383	1,888	237	117	137	3,780			24.39	41
Virginia	Public Four	1,785	127	1,022	18	618	1,735	151	6	51	2,145	39	145	14.79	63
	Public Two	1,349	134	970	23	220	2,024	173	17	8	2,046			14.11	17
	Private Four	2,750	113	25	502	2,110	1,647	403	0	179	3,175			21.90	19
Washington	Public Four	2,341	171	1,852	0	544	1,963	233	34	31	2,209	36	204	10.83	40
	Public Two	1,187	155	887	0	253	2,194	80	17	11	2,339			11.47	48
	Private Four	1,934	2	0	0	2,096	1,831	311	25	114	3,477			17.04	12
West Virginia	Public Four	1,331	64	1,167	0	291	1,924	225	15	33	1,942	41	179	10.85	72
	Public Two	1,077	122	752	0	350	1,850	113	106	7	1,974			11.03	10
	Private Four	1,879	28	0	170	1,681	1,706	609	98	161	2,519			14.07	16
Wisconsin	Public Four	2,920	61	2,155	93	611	1,872	268	63	73	2,079	37	197	10.55	59
	Public Two	1,756	176	1,477	0	374	1,562	651	70	5	1,210			6.14	27
	Private Four	2,457	96	113	73	2,175	1,801	326	196	117	3,337			16.94	14
Wyoming	Public Four	3,188	689	1,935	139	425	1,875	232	0	115	1,953	45	194	10.07	59
	Public Two	1,776	265	1,295	0	259	1,622	146	0	52	1,683			8.68	14
	Private Four													--	0
Public Four	Average	2,462	146	1,504	347	523	1,763	289	23	37	2,038			11.87	
	Number	51	51	51	51	51	51	51	51	51	49			49	
Public Two	Average	1,415	151	995	72	283	1,406	174	67	9	1,773			10.41	
	Number	51	51	51	51	51	51	50	51	51	43			43	
Private Four	Average	2,246	103	24	320	1,863	1,748	448	66	142	3,080			17.70	

Table 31

Correlations for Instruction and Support Expenditures Per Weighted FTE Student and Related Factors: FY 1974

Variable	Public Four-Year	Public Two-Year	Private Four-Year
Residents enrolled in-state/18-20 year-old population	-0.11	0.06	0.13
Percent of population nonwhite	-0.03	-0.33*	-0.05
Percent of population low income	0.11	0.09	-0.00
Percent living in metropolitan area	-0.13	-0.19	0.13
Student aid revenue per student	0.52*	0.25*	0.60*
Percent of general revenue from tuition and fees	0.27*	0.24*	0.47*
Percent of enrollment at research universities	0.23*	--	0.15
Percent of enrollment at liberal arts college	0.02	--	-0.19

Table32: Correlations for General Educational Revenue Sources and Related Factors at Public Four-Year Institutions: FY 1974

	Percent of General Revenues from:					
	Tuition and Fees	Federal Sources	State Sources	Local Sources	Endowment Income	Private Gifts
Residents enrolled in-state/ 18-20 year-old population	0.10	0.27[b]	0.27[b]	-0.10	0.05	0.04
Percent of population nonwhite	-0.33[b]	-0.09	-0.27[b]	0.62[a]	0.08	-0.06
Percent of population low income	-0.02	0.39[a]	0.27[b]	-0.09	-0.12	0.16
Percent living in metropolitan areas	-0.14	-0.40[a]	-0.08	0.21	0.06	0.15
Expenditures per student	0.27[b]	0.19	0.42[a]	-0.19	-0.24[b]	0.39[a]
Student aid revenues per student	0.07	0.12	0.15	0.08	-0.08	0.23
Percent of enrollment at research universities	0.15	0.13	0.02	-0.35[b]	-0.16	0.20
Percent of enrollment at liberal arts colleges	0.26[b]	-0.16	-0.04	-0.07	-0.04	0.08

a: Statistically significant at 1% level
b: Statistically significant at 5% level

(1) Students pay a larger share of total general revenues through tuition and fees in states with a smaller percentage of nonwhite population and with a larger level of instruction and support expenditures per student.

(2) States receiving a larger share of total general revenues from the federal government also have a higher percentage of low income population and a smaller percentage of population living in metropolitan areas.

(3) States providing a larger share of total general revenues themselves also have higher in-state enrollment rates, lower percentages of nonwhite population, higher percentages of low income population, and higher levels of instruction and support expenditures per student.

(4) States providing a larger share of total general revenues from local sources also have a larger percentage of nonwhite population and a smaller percentage of enrollment at research universities.

(5) States receiving a larger share of total general revenues from private gifts are also states that have higher per student instruction and support expenditures.

Similar simple correlations are given in Table 33 for public two-year colleges. These results support the following statements:

(1) Students pay a larger share of total general revenues through tuition and fees in states with smaller percentages of nonwhite population and with larger levels of instruction and support expenditures per student.

(2) States providing a larger share of total general revenues themselves also have higher levels of expenditures for instruction and support per student.

(3) States providing a larger share of total general revenues from local sources also have higher in-state enrollment rates, lower percent-

Table 33: Correlations for General Educational Revenue Sources and Related Factors at Public Two-Year Institutions: FY 1974

	Percent of General Revenues from:					
	Tuition and Fees	Federal Sources	State Sources	Local Sources	Endowment Income	Private Gifts
Residents enrolled in-state/ 18-20 year-old population	-0.21	-0.05	-0.03	0.48[a]	-0.14	0.12
Percent of population nonwhite	-0.25[b]	-0.16	-0.05	-0.19	-0.05	0.00
Percent of population low income	0.01	0.21	0.14	-0.27[b]	0.23	0.15
Percent living in metropolitan areas	-0.02	-0.32[b]	0.01	0.05	-0.14	0.14
Expenditures per student	0.24	0.15	0.38[a]	0.31[b]	0.30[b]	0.20
Student aid revenues per student	0.17	0.22	0.15	0.03	0.14	0.40[a]

a: Statistically significant at 1% level
b: Statistically significant at 5% level

Table 34: Correlations for General Educational Revenue Sources and Related Factors at Private Four-Year Institutions: FY 1974

	Percent of General Revenues from:					
	Tuition and Fees	Federal Sources	State Sources	Local Sources	Endowment Income	Private Gifts
Residents enrolled in-state/ 18-20 year-old population	0.25[b]	0.22	0.20	-0.01	0.10	0.06
Percent of population nonwhite	-0.08	0.17	-0.06	0.18	-0.04	0.17
Percent of population low income	0.08	0.21	-0.28[b]	-0.03	-0.12	0.45[a]
Percent living in metropolitan areas	0.17	-0.10	0.38[a]	0.16	0.27[b]	0.16
Expenditures per student	0.47[a]	0.16	0.31[a]	0.23	0.70[a]	0.04
Student aid revenues per student	0.17	0.09	0.47[a]	0.27[b]	0.69[a]	0.01
Percent of enrollment at research universities	0.18	-0.05	0.20	0.07	0.20	0.06
Percent of enrollment at liberal arts colleges	-0.14	-0.04	-0.34[b]	-0.03	-0.24	0.32[b]

a: Statistically significant at 1% level
b: Statistically significant at 5% level

ages of low income population, and higher levels of instruction and support expenditures per student.

Table 34 contains the correlation results for the private four-year colleges and universities. These correlations suggest the following statements:

(1) Students pay a larger share of total general revenues through tuition and fees in states with larger levels of instruction and support expenditures per student which is consistent with the results for the other sectors.

(2) States providing a larger share of total general revenues themselves also have smaller percentages of low income population, larger percentages of population living in metropolitan areas, higher levels of instruction and support expenditures per student, larger levels of student aid revenues per student, and smaller percentages of enrollment at liberal arts colleges.

(3) States receiving a larger percentage of general revenues from endowment income also have higher instruction and support expenditures per student and larger amounts of student aid revenues per student.

(4) States receiving a larger percentage of general revenues from private gifts are also states with larger percentages of low income population.

(3) State effort variations: To emphasize the variations in state and local support of colleges and universities across the states, Table 35 contains descriptive financing data for each state. In fiscal year 1973-74, the state and local governments provided close to $19 billion of support to colleges and universities. These expenditures represented 9.5% of the total expenditures made by all state and local governments and about 25% of all state and local expenditures for education at all levels (elementary, secondary, and higher). In FY 1974, approximately 85% of the higher education expenditures were for operating expenses. Given the rapid expansion of higher education facilities during the mid 1960s and the anticipated slowdown in enrollment growth for the future, the percent of total expenditures for operating uses has increased

Table 35: State and Local Expenditures for Institutions of Higher Education by State: FY 1974

State	Expenditures Per Capita	Expenditures Per Headcount Student	Expenditures Relative to FY 1967 Level	Percent of Education Expenditures	Percent of Total Expenditures	Percent Operating Expenditures	Percent State Expenditures
Alabama	$ 91.28	$2,574	2.24	33.5	12.8	81.7	100.0
Alaska	162.17	4,182	2.94	19.8	6.6	84.5	100.0
Arizona	125.52	1,961	2.04	31.6	14.1	87.6	79.5
Arkansas	63.10	2,431	1.86	26.5	10.4	84.9	96.4
California	106.64	1,515	2.03	26.6	9.5	91.2	64.6
Colorado	136.86	2,608	2.01	31.5	14.5	89.7	93.7
Connecticut	52.40	1,195	2.27	14.7	5.5	91.8	100.0
Delaware	144.29	2,837	2.49	28.6	13.8	76.7	100.0
District of Columbia	70.46	622	21.17	18.9	4.0	83.1	100.0
Florida	70.88	2,042	2.81	24.0	9.1	88.0	62.8
Georgia	74.10	2,465	2.52	25.4	9.3	82.0	98.0
Hawaii	136.53	2,736	2.14	35.2	10.2	82.9	100.0
Idaho	87.42	1,975	1.91	28.8	10.6	88.9	91.2
Illinois	100.64	2,284	2.76	26.1	10.7	81.4	74.8
Indiana	93.36	2,478	1.66	27.7	13.0	88.4	97.2
Iowa	105.04	2,737	1.89	26.8	12.4	85.1	81.6
Kansas	106.36	2,230	2.05	30.7	12.8	87.5	81.9
Kentucky	86.29	2,613	1.82	30.5	12.1	85.2	100.0
Louisiana	67.19	1,869	1.46	22.6	8.2	94.5	99.9
Maine	52.53	1,525	1.54	17.8	6.4	97.8	100.0
Maryland	86.33	2,006	2.60	21.8	8.2	80.8	75.2
Massachusetts	85.76	1,494	4.27	23.0	8.1	51.1	99.7
Michigan	114.65	2,452	1.72	27.2	11.2	85.5	85.0
Minnesota	110.42	2,641	2.04	26.3	10.6	85.8	100.0
Mississippi	89.16	2,527	2.34	32.4	12.2	81.2	80.5
Missouri	69.87	1,726	1.79	23.6	9.7	91.1	82.1
Montana	97.56	2,632	1.85	25.8	10.9	86.7	93.9
Nebraska	89.75	2,094	1.92	26.9	10.9	89.2	94.1
Nevada	85.71	2,455	2.17	23.3	7.5	80.7	100.0
New Hampshire	74.91	1,814	1.80	25.3	9.7	98.2	100.0
New Jersey	69.29	1,992	3.88	18.3	7.1	76.2	78.2
New Mexico	136.73	3,133	1.74	35.5	16.2	87.3	100.0

(table continued)

State	Expenditures Per Capita	Expenditures Per Headcount Student	Expenditures Relative to FY 1967 Level	Percent of Education Expenditures	Percent of Total Expenditures	Percent Operating Expenditures	Percent State Expenditures
New York	$ 81.87	$1,640	2.16	18.3	5.6	82.3	54.5
North Carolina	91.78	2,411	2.37	29.6	13.4	91.7	77.3
North Dakota	118.87	2,566	1.69	33.9	13.4	84.1	93.9
Ohio	73.39	1,987	1.95	24.9	9.8	87.0	77.2
Oklahoma	90.23	1,921	1.62	31.1	11.6	91.2	97.9
Oregon	113.26	1,937	1.74	28.0	11.4	92.6	71.5
Pennsylvania	47.99	1,289	2.10	14.0	5.4	80.7	79.7
Rhode Island	81.34	1,384	2.24	23.6	9.0	96.5	100.0
South Carolina	80.44	2,314	3.12	25.6	10.8	75.8	100.0
South Dakota	105.57	2,714	1.75	30.2	12.2	92.8	100.0
Tennessee	72.72	1,948	1.99	27.6	10.0	82.5	100.0
Texas	87.28	2,032	2.41	27.8	12.1	81.3	85.1
Utah	146.14	2,141	1.83	34.7	17.5	88.9	100.0
Vermont	121.15	2,046	1.95	30.1	11.3	93.5	100.0
Virginia	83.86	2,130	2.79	24.6	10.2	82.4	100.0
Washington	123.87	2,170	1.93	29.9	12.0	92.8	100.0
West Virginia	61.29	1,604	1.47	20.8	7.5	94.4	100.0
Wisconsin	141.02	2,910	2.02	34.4	14.4	88.8	78.3
Wyoming	143.65	2,901	1.52	30.3	13.1	87.5	73.5
National	96.25	2,196	2.52	26.6	10.6	86.1	90.2

significantly from 73% in FY 1967. This trend is most likely to continue. In FY 1974, approximately 82% of the combined expenditures were made by the state level governments. This 82% in FY 1974 compares to an 88% in FY 1967. This decline in the state's share of higher education expenditures is most likely due to the increasing share of enrollment at public two-year colleges and to the decline in capital expenditures which were generally from the state level.

The state variations in each of the state and local higher education expenditure variables described above are very significant and are illustrated in Table 35. The level of state and local expenditures for institutions of higher education on a per capita basis varies from $47.99 in Pennsylvania to $146.14 in Utah (excluding Alaska). Eleven states spend over $120 per capita on their colleges and universities, while fourteen states spend less that $75 per capita. Expenditures per headcount student range from $1,195 in Connecticut (excluding D.C.) to $3,133 in New Mexico (excluding Alaska). The growth in state and local expenditures for colleges and universities is also quite varied across the states. Four states (D.C., Massachusetts, New Jersey, and South Carolina) have more than tripled their expenditure level between FY 1967 and FY 1974. During the same time period, 23 states have more than doubled (but less than tripled) their expenditures for higher education institutions. Four states (Louisiana, Maine, West Virginia, and Wyoming) have barely kept pace with inflation, much less with any enrollment growth.

The revealed preferences of state and local decision makers for higher education relative to other public services and activities are also illustrated in Table 35. In terms of the percent higher education expenditures of total state and local expenditures for all purposes, five states (Arizona, Colorado, New Mexico, Utah, and Wisconsin) have more than 14% committed to higher education, while six states (Alaska, Connecticut, D.C., Maine, New York, and Pennsylvania) have less than 7%. A similar diversity exists for the percent higher education

expenditures of total state and local education expenditures as shown in Table 35. The split of higher education financial support between states and local support is also quite varied. Twenty-one states provide 100% of their state and local support to higher education from state revenues only. Three states (California, Florida, and New York) generate less than 70% of their combined state and local support from state sources. The large, public, two-year systems in these three states are mostly supported by local revenues. These diversities in funding levels and patterns are extremely important to consider when attempting to assess the "equity" of state distributions of federal funds. The "state effort" issue cannot be avoided. Although this study has a student aid (and a federal) emphasis, it is necessary background to understand all dimensions of higher education financing.

Since the level of state and local support to colleges and universities is very diverse across states, an attempt was made to correlate various state demographic, economic, and education characteristics with the degree of financial support. The dynamics that underlie the evolution of the higher education system in each state are complex and no attempt is made here to suggest causality between variables. At best, this type of analysis simply indicates factors that are correlated with one another.

As a first step in the analysis, three different measures of a state's financial commitment to higher education were related to several state characteristics. The three financial commitment measures are:

(1) State and local higher education expenditures per 18-20 year-old.

(2) Percent of state and local education expenditures for higher education.

(3) Percent of total state and local expenditures for higher education.

The state descriptive variables used are:

(1) Percent nonwhite population.

(2) Percent low-income population.

(3) Percent of FTE undergraduate enrollment at public two-year institutions.

(4) Percent of population over 25 years of age who have completed at least one year of college.

(5) Percent of enrolled state residents attending college out-of-state.

(6) Percent of FTE undergraduate enrollment from out-of-state.

Each of the state financial commitment measures were regressed on all of the state descriptive variables and the results are shown in Table 36. For each of the financial commitment measures, approximately one-half of the variation across the states was accounted for by the selected set of state descriptive variables (again, no causality implied). The educational attainment variable was significantly positive in all three equations, which suggests that the more highly educated the population is the larger is the commitment to higher education. The percent of enrolled state residents attending college out-of-state was significantly negative in all three equations. The in-state financing burden or commitment for higher education is lessened as more residents go out-of-state for their education beyond high school. An alternative hypothesis is that a larger percentage of residents must attend out-of-state because there are not sufficient funds in-state to educate them. The fact that the percent of FTE undergraduates from out-of-state is not significantly related to the financial commitment to higher education suggests that either out-of-state tuitions are high enough to offset the costs of enrollment from out-of-state, or that other adjustments in terms of enrollment rates or institutional expenditures per student are being made.

The percent low-income population factor is not significantly related to the expenditure level per 18-20 year-old which does suggest, however, that the lower income states are having to pay out more per dollar of income. Also, the results for the other two financial commitment variables show significant positive relationships with the low-income percentage. These results suggest that the lower income states are making a relatively stronger

Table 36 : State and Local Higher Education Expenditures Related to State Characteristics: FY 1974

	Expenditures Per 18-20 Year-Old	Percent of Education Expenditures	Percent of Total Expenditures
Constant	350.6	-4.48	-2.36
	(2.2)*	(0.5)	(2.4)
Percent nonwhite population	-5.13	-0.02	-0.05
	(0.6)	(3.8)	(3.1)
Percent low income population	6.00	0.55	0.28
	(1.2)	(0.1)	(0.3)
Percent enrollment at public-two	4.71	0.0056	-0.01
	(4.1)	(3.1)	(2.2)
Educational attainment	37.08	0.41	0.19
	(2.5)	(3.3)	(3.0)
Percent migrating out	-12.09	-0.23	-0.13
	(1.2)	(1.0)	(0.5)
Percent migrating in	5.31	0.06	0.02
R^2	0.49	0.51	0.47

* t-statistics in parentheses.

commitment to higher education in terms of the level and share of state and local revenue to higher education. The percent nonwhite population was significantly negative for both the expenditure measures. These results suggest a smaller financial commitment to higher education for states with larger percentages of nonwhite population.

A second step in the analysis of state and local higher education financing is to calculate the simple correlations between several state, local and federal financing measures and the following state characteristics.

(1) Percent low-income population

(2) Percent nonwhite population

(3) Percent low-income enrollment

(4) Percent nonwhite enrollment

(5) Percent of enrollment at public two-year

(6) Percent of enrollment at private four-year

(7) Average tuition

(8) Average institutional student aid

Based on the correlations presented in Table37, the following statements about state, local and federal financing of higher education may be made.

(1) States with larger levels of state student aid per FTE undergraduate are also likely to have a smaller percentage of low-income population, a smaller percentage of nonwhite population, a larger percentage of enrollment in private four-year institutions, a higher average tuition, and a higher level of student aid from institutional sources.

(2) States with larger levels of state and local general appropriations per FTE undergraduates are also likely to have a larger percentgae of enrollment in public two-year colleges, a smaller percentage of enrollment in private four-year institutions, and a lower average tuition.

(3) States with larger levels of state and local sponsored programs

Table 37 Correlations for State Distributions of State and Local Higher Education Support and State Characteristics: FY 1974

	Percent Low Income Population	Percent Nonwhite Population	Percent Low Income Enrollment	Percent Nonwhite Enrollment	Percent of Enrollment at Public Two-Year	Percent of Enrollment at Private Four-Year	Average Tuition	Average Institutional Student Aid
State student aid per FTE undergraduate	-0.42[a]	-0.20	-0.12	-0.15	0.04	0.34[b]	0.49[a]	0.25
State and local general appropriations per FTE undergraduate	0.11	-0.15	0.12	0.05	0.23	-0.40[a]	-0.32[b]	-0.07
State and local sponsored programs per FTE undergraduate	0.14	-0.00	0.11	0.21	-0.05	0.06	-0.06	-0.09
Federal student aid per FTE undergraduate	-0.09	-0.22	0.02	-0.11	-0.18	0.29	0.40	0.42[a]
Federal general appropriations per FTE undergraduate	0.29[b]	0.07	0.32[b]	0.25	-0.00	-0.10	-0.15	0.02
Federal sponsored programs per FTE undergraduate	0.45[a]	0.41[a]	0.10	0.16	-0.13	-0.05	-0.15	-0.15

a: Statistically significant at the 1% level.
b: Statistically significant at the 5% level.

per FTE undergraduate are also likely to have a larger percentage of nonwhite enrollment.

(4) States with larger levels of federal student aid per FTE undergraduate are also likely to have a smaller percentage of nonwhite population, a larger percentage of enrollment at private four-year institutions, a higher average tuition, and a higher level of student aid from institutional sources.

(5) States with larger levels of federal general appropriations per FTE undergraduate are also likely to have a larger percentage of low-income population, a larger percentage of low-income enrollment, and a larger percentage of nonwhite enrollment.

(6) States with larger levels of federal sponsored programs per FTE undergraduate are also likely to have a larger percentage of low-income population and a larger percentage of nonwhite population.

It is interesting to note that at the state level of aggregation it appears that federal institutional support (general appropriations and sponsored programs) is more positively related to low-income and nonwhite population percentages than is federal student aid. A similar conclusion holds for state and local financing. That is, at the state aggregate level federal and state student money is available in larger amounts per FTE undergraduate at the "richer" states than at the "poorer" states. The mix of institutions and the costs of living across states must also be examined in order to put this result into proper perspective. State and federal student aid levels do seem to be positively correlated to the level of tuition.

A final analysis for this section is a multivariate extension of the correlations discussed above. Each of the following three state financing variables are regressed on several state descriptive and federal financing variables.

(1) State student aid per 18-20 year-old.

(2) State and local general appropriations per 18-20 year-old.

(3) State and local sponsored programs per 18-20 year-old.

The explanatory variables are:

(1) Percent low-income enrollment.

(2) Percent nonwhite enrollment.

(3) Average tuition.

(4) Federal student aid per 18-20 year-old.

(5) Student aid from institutional source per 18-20 year-old.

(6) Federal general appropriations per 18-20 year-old.

(7) Federal sponsored programs per 18-20 year-old.

The results of the regression analysis are shown in Table 38. The results from this multivariate analysis suggest the following relationships.

(1) States with larger amounts of state student aid per 18-20 year-old are also likely to have higher average tuitions, larger amounts of federal student aid per 18-20 year-old, and smaller amounts of federal sponsored program dollars per 18-20 year-old.

(2) States with larger amounts of state and local general appropriations per 18-20 year-old are also likely to have lower average tuitions and larger amounts of federal general appropriations per 18-20 year-old.

(3) States with larger amounts of state and local sponsored programs per 18-20 year-old are also likely to have a larger percentage of nonwhite enrollment.

Table 38: State and Local Higher Education Expenditures Related to Institutional and Financing Characteristics: FY 1974

	State Student Aid Per 18-20 Year-Old	State and Local General Appropriations Per 18-20 Year-Old	State and Local Sponsored Programs Per 18-20 Year-Old
Constant	-5.81	768.6	17.2
Percent low income enrollment	(0.4)*	(0.5)	(1.6)
	-0.230	-2.87	-0.681
Percent nonwhite enrollment	(0.3)	(0.1)	(2.1)
	0.114	0.259	0.634
Average tuition	(2.8)	(2.4)	(0.6)
	0.0287	-0.303	-0.00467
Federal student aid per 18-20 year-old	(4.1)	(1.?)	(1.4)
	0.194	0.774	0.0535
Institutional aid per FTE undergraduate	(2.0)	(0.6)	(0.3)
	-0.159	0.601	-0.0212
Federal general appropriations per 18-20 year-old	(1.7)	(2.2)	(1.8)
	-0.128	2.01	-0.107
Federal sponsored programs per 18-20 year-old	(2.4)	(0.4)	(0.2)
	-0.116	-0.246	0.0085
R^2	0.56	0.23	0.16

* t-statistics in parentheses.

(4) Living expenses: Another important factor to consider in comparing student budgets relative to earnings across states is the variation in nontuition expenses associated with attending college. As shown below, the living and other expenses (all specified for resident students) are quite varied relative to average weekly earnings.

State	Sector	Living and Other Nontuition Expenses	Average Weekly Earnings	Expense Earnings
Alabama	Pub. 4	$1,746	$152	11.5
California	Pub. 4	2,346	188	12.5
Arizona	Pub. 4	1,680	172	9.8
Mississippi	Pub. 4	1,612	125	12.9
North Dakota	Pub. 4	1,453	154	9.4

It appears that a significant proportion of the nontuition expenses can be explained by the "income" level of the state and presumably the "cost of living." Further analysis should be undertaken to better understand the factors leading to these expense variations.

(5) Student aid: Of direct concern for this study is the level and distribution of student financial assistance funds across the fifty-one states. Correlations between funding levels by program on a FTE undergraduate basis and state characteristic variables are shown in Table 39. The correlation results are summarized below in an outline format for each state descriptive variable.

(1) Percent low-income population: The largest positive correlation is with BEOG dollars per FTE undergraduate followed by CWSP dollars per FTE undergraduate, federal sponsored program dollars per FTE undergraduate, NDSL dollars per FTE undergraduate, and federal general appropriation dollars per FTE undergraduate. The only significantly negative correlation is with the percent loans of total O.E. aid. More loans go to the richer states.

Table 39: Correlations for State Distributions of Federal Higher Education Support Funds and State Characteristics: FY 1974

	Percent Low Income Population	Percent Nonwhite Population	Percent Low Income Enrollment	Percent Nonwhite Enrollment	Percent of Enrollment at Public Two-Year	Percent of Enrollment at Private Four-Year	Average Tuition	Average State Student Aid	Average Institutional Student Aid
SEOG dollars per FTE undergraduate	0.18	-0.00	0.15	0.05	-0.22	0.20	0.22	-0.07	0.02
NSDL dollars per FTE undergraduate	0.32[b]	-0.09	0.28[b]	0.13	-0.32[a]	0.15	0.13	-0.07	0.11
CWSP dollars per FTE undergraduate	0.49[a]	0.12	0.48[a]	0.34[b]	-0.34[b]	-0.04	-0.05	-0.27[b]	-0.04
BEOG dollars per FTE undergraduate	0.56[a]	0.26[b]	0.74[a]	0.62[a]	-0.16	-0.14	-0.15	-0.09	-0.29[b]
SSIG dollars per FTE undergraduate	-0.15	0.18	0.18	0.21	-0.03	0.33	0.28[b]	0.29[b]	0.18
GSLP dollars per FTE Undergraduate	-0.21	-0.25	-0.10	-0.19	-0.08	0.28[b]	0.40[a]	0.66[a]	0.45[a]
Percent grants of total O.E. aid	0.12	0.30[b]	0.19	0.25	0.10	-0.13	-0.26[b]	-0.49[a]	-0.43[a]
Percent loans of total O.E. aid	-0.29[b]	-0.36[b]	-0.31[b]	-0.36[b]	-0.04	0.23	0.37[b]	0.60[a]	0.43[a]
Percent institutional-based of total O.E. aid	0.23	0.32[b]	0.20	0.26[b]	0.05	-0.25	-0.40[a]	-0.63[a]	-0.43[a]
Federal general appropriation dollars per FTE undergraduate	0.29[b]	0.07	0.32[b]	0.25	-0.00	-0.10	-0.15	-0.23	0.02
Federal sponsored program dollars per FTE undergraduate	0.45[a]	0.41[a]	0.10	0.16	-0.13	-0.05	-0.15	-0.27[b]	-0.15

a: Statistically significant at the 1% level.
b: Statistically significant at the 5% level.

(2) Percent nonwhite population: The largest positive correlation is with federal sponsored program dollars followed by percent grants of total O.E. aid and BEOG dollars.

(3) Percent low-income enrollment: The significant positive correlations are with BEOG dollars, CWSP dollars, federal general appropriations, and NDSL. The only significant negative correlation is with the percent loans of all O.E. student aid.

(4) Percent nonwhite enrollment: The significant, positive correlations are with BEOG dollars and CWSP. The percent loans of total federal aid is negatively (significant) correlated with the percent nonwhite.

(5) Percent of enrollment at public two-year: There are no significantly positive correlations. The significant, negative correlations are with NDSL dollars and CWSP dollars.

(6) Percent of enrollment at private four-year: The only significant correlations are positive and with SSIG dollars and GSLP dollars. As later results will substantiate, SSIG and GSLP funds go very heavily to students at high cost institutions.

(7) Average tuition: The significant, positive correlations are with SSIG, GSLP, and the percent loans of total O.E. aid. These results suggest that students at higher cost institutions use a stronger mix of loans relative to grant and work-study support. Since SSIG and GSLP funds are noninstitutional-based programs, the negative correlation here is consistent.

(8) Average state student aid: The significant, positive correlations are with SSIG, GSLP, and the percent loans just like the correlations for average tuition. The percent grants and percent institutional-based program dollars are negatively correlated with state student aid.

(9) Average institutional student aid; The significant, positive correlations are with GSLP and the percent loans of total. The negative and significant correlations are with BEOG, percent grants, and the percent of federal and institutional-based.

A set of regression equations are given in Table 40 , which have the same set of dependent variables as the previous table. The following outline is organized by dependent variable with the significant explanatory variables indicated.

(1) BEOG dollars per FTE undergraduate

Positive: percent low-income enrollment
Negative: institutional student aid per FTE undergraduate

(2) SEOG dollars per FTE undergraduate

None

(3) NDSL dollars per FTE undergraduate

None

(4) CWSP dollars per FTE undergraduate

Positive: percent low-income enrollment

(5) SSIG dollars per FTE undergraduate

Positive: average tuition
Negative: percent of enrollment from out-of-state

(6) GSLP dollars per FTE undergraduate

Positive: state student aid per FTE undergraduate
institutional student aid per FTE undergraduate

(7) Percent grants of total O.E. aid

Negative: state student aid per FTE undergraduate
institutional student aid per FTE undergraduate

Table 40: Federal Higher Education Support to States: Substitutes or Complements?

	Dependent Variables	Constant	Percent Low Income Enrollment	Average Tuition	State Student Aid Per FTE Undergraduate	Institutional Student Aid Per FTE Undergraduate	Percent of Enrollment From Out-of-State	R^2
(1)	BEOG dollars per FTE undergraduate	43.53	(6.8)* 1.17	(1.5) 0.019	(0.8) -0.046	(2.0) -0.129	(1.6) -0.46	0.60
(2)	SEOG dollars per FTE undergraduate	28.07	(1.1) 0.148	(1.2) 0.0115	(0.9) -0.044	(1.1) -0.055	(0.6) 0.152	0.15
(3)	NDSL dollars per FTE undergraduate	40.64	(1.9) 0.148	(1.3) 0.00744	(1.2) -0.035	(0.3) 0.0082	(0.8) -0.117	0.14
(4)	CWSP dollars per FTE undergraduate	39.3	(3.5) 0.537	(0.4) 0.0046	(1.6) -0.088	(0.2) 0.013	(0.0) -0.0079	0.29
(5)	SSIG dollars per FTE undergraduate	1.86	(1.2) 0.012	(2.2) 0.0017	(0.1) 0.00031	(0.0) 0.00010	(2.2) -0.039	0.24
(6)	GSL dollars per FTE undergraduate	71.6	(0.0) 0.023	(0.3) -0.018	(4.3) 1.46	(2.9) 1.04	(0.8) -1.25	0.55
(7)	Percent grants of total O.E. aid	19.25	(1.0) 0.053	(0.3) 0.00128	(2.6) -0.047	(3.0) -0.058	(1.2) 0.108	0.41
(8)	Percent loans of total O.E. aid	60.52	(2.1) -0.192	(0.0) 0.000015	(3.4) 0.111	(2.5) 0.084	(0.9) -0.149	0.51
(9)	Percent institutional-based of total O.E. aid	56.93	(1.0) 0.114	(0.2) -0.0016	(3.6) -0.150	(2.3) -0.0023	(0.9) 0.188	0.50
(10)	Federal general appropriation dollars per FTE undergraduate	85.59	(2.1) 1.54	(0.1) -0.0036	(1.3) -0.333	(1.1) 0.318	(0.7) -0.948	0.18
(11)	Federal sponsored program dollars per FTE undergraduate	192.7	(0.2) 0.257	(0.7) 0.057	(1.7) -0.699	(0.7) -0.288	(0.7) -1.31	0.09

* t-statistics in parentheses.

(8) Percent loans of total O.E. aid

Positive: state student aid per FTE undergraduate
institutional student aid per FTE undergraduate
Negative: percent low-income enrollment

(9) Percent institutional-based of total O.E. aid

Negative: state student aid per FTE undergraduate
institutional student aid per FTE undergraduate

(10) Federal general appropriation dollars per FTE undergraduate

Positive: percent low-income enrollment

(11) Federal sponsored program dollars per FTE undergraduate

At the state aggregate level, the answer to the question, "Are federal funds substitutes for or complements to state student aid and/or institutional student aid", seems to be that states with larger amounts of state student aid and institutional student aid are also states with large amounts of GSLP. The only substitution effect appears to be between BEOG and institutional student aid.

Additional analyses were done by institutional sector relating each aid program distribution to various state demographic variables. The regression results are shown in Tables 41-42.

(6) Student aid from institutional (nonpublic) sources: Since colleges and universities provide some student financial assistance from their own resources, it is necessary to place these student aid funds in perspective. In FY 1974, these nonpublic funds for student aid purposes totaled $343.2 million. For FY 1974, the percentages of the total institutional revenue for student aid from nonpublic sources are given below.

Table 41: Federal Student Aid Program Dollar Distributions - FY 1974

Dependent Variable	Explanatory Variables	Institutional Sector		
		Public Four	Public Two	Private Fou
BEOG Dollars Per	Percent low income population	274.92*	522.70*	493.90*
Lower Division	Average tuition	0.0149	0.0161	-0.0528*
Undergraduates	Percent nonwhite population	163.48*	-63.94	45.6
	R^2	0.45	0.47	0.43
SEOG Dollars	Percent low income population	14.77	43.62	330.00
Per FTE	Average tuition	0.0213	0.0083	0.0296
Undergraduate	Percent nonwhite population	-9.20	-41.83	-23.84
	R^2	0.12	0.22	0.00
NDSL Dollars	Percent low income population	115.83	83.55*	125.56
Per FTE	Average tuition	0.00444	0.00455	-0.028
Undergraduate	Percent nonwhite population	-33.39	-42.48*	-74.66
	R^2	0.08	0.34	0.22
CWSP Dollars	Percent low income population	548.60	203.72*	4357.43*
Per FTE	Average tuition	-0.0356	0.00128	0.4186
Undergraduate	Percent nonwhite population	362.9	-24.49	-160.65
	R^2	0.09	0.17	0.27
SSIG Dollars	Percent low income population	-12.13	-4.95	-14.05
Per FTE	Average tuition	0.00284	-0.00106	-0.000555
Undergraduate	Percent nonwhite population	-5.38	-6.95*	-6.52
	R^2	0.36	0.16	0.06

Table 42: Federal Student Aid Program Recipient Distributions - FY 1974

Dependent Variable	Explanatory Variables	Institutional Sector		
		Public Four	Public Two	Private F
BEOG Recipients	Percent low income population	0.083	0.994*	0.618
Per Lower Division	Average tuition	-0.000212	0.0000242	-0.0000736
Undergraduates	Percent nonwhite population	0.0252	-0.172	0.0123
	R^2	0.15	0.49	0.43
SEOG Recipients	Percent low income population	0.170	0.136	0.375
Per FTE	Average tuition	-0.00000101	0.0000282	-0.00004485
Undergraduates	Percent nonwhite population	-0.0909	-0.0960	0.00224
	R^2	0.03	0.24	0.49
NDSL Recipients	Percent low income population	0.287	0.137	0.281
Per FTE	Average tuition	0.0000389	0.00004	-0.0000520
Undergraduates	Percent nonwhite population	-0.09068739	-0.0871*	-0.0887
	R^2	0.08	0.23	0.31
CWSP Recipients	Percent low income population	0.375	0.217	0.613
Per FTE	Average tuition	-0.0000845	-0.0000313	-0.0000567
Undergraduates	Percent nonwhite population	-0.0553	-0.0532	-0.0486
	R^2	0.17	0.05	0.44
SSIG Recipients	Percent low income population	-0.0675	-0.235	-0.0438
Per FTE	Average tuition	0.0000182	0.0000116	0.57505
Undergraduates	Percent nonwhite population	-0.03256	-0.0177	-0.0273
	R^2	0.12	0.14	0.07

Institutional Category	Endowment Income	Private Gifts	Other Private Sources	Total Nonpublic Sources
Public four-year	4.3	21.7	3.0	29.0
Public two-year	0.1	11.6	2.6	14.3
Private four-year	15.6	24.0	6.0	45.6

The total share of institutional student aid from nonpublic sources has declined since 1967. This information is summarized below.

Institutional Category	1967	1974	1974/1967
Public four-year	34.9	29.0	0.83
Public two-year	54.6	14.3	0.26
Private four-year	61.2	45.6	0.75

State variations in the mix of student aid sources is very diverse. Six states (Hawaii, Idaho, Illinois Missouri, Nevada, and South Carolina) generated over one-half of their institutional revenues at public four-year institutions from nonpublic sources. Five states (Alabama, Kentucky, Louisiana, Mississippi, and New Jersey) generated close to, or less than 10% of the student aid revenues at public four-year colleges and universities from nonpublic sources.

The proportion of institutional revenues for student aid purposes varies significantly with respect to public or nonpublic sources. Within the nonpublic component of the student aid revenues, the mix of endowment income, private gifts, and other private sources are quite different across states within each institutional category. The simple correlations for each of the following revenue variables with the same state descriptive factors were computed for each institutional sector.

(1) percent of student aid revenues from endowment income.

(2) Percent of student aid revenues from private gifts.

(3) Percent of student aid revenues from other private sources.

From these calculations only a small number of correlations are significantly different from zero and they are described below.

(1) For public four-year institutions, the states with larger percentage of student aid revenues from private gifts also have larger shares of student aid revenues per student and larger shares of enrollment at research universities.

(2) For public two-year colleges, states with either a larger percentage of student aid revenues from endowment income or private gifts also have a higher level of student aid revenues per student.

(3) For both four-year and two-year institutions, states with larger percentages of population in metropolitan areas also have smaller percentages of student aid revenue from other private sources.

(4) For private four-year institutions, states with larger percentages of student aid revenue from endowment income also have smaller percentages of nonwhite population, smaller percentages of low income population, and larger levels of student aid revenues per student.

The level of institutional student aid revenues per student as illustrated in a previous section varies dramatically across states. In an attempt to relate some of this variation to state descriptive factors, the level of institutional student aid revenues were regressed on the following variables for each institutional sector:

(1) Constant

(2) Percent nonwhite population

(3) Percent low-income population

(4) Expenditures for instruction and support per student

None of the estimated coefficients for any of the institutional sectors were significantly different from zero.

VII. STATE VARIATIONS IN ACCESS

Enrollment comparisons across states are directly not very meaningful since the population base varies considerably from state to state. It is necessary to calculate enrollment or participation ratios by dividing alternative enrollment variables by different population variables. The ideal way of calculating enrollment rates or higher education participation rates would be to conduct extensive surveys of individuals annually so that trends over time and variations across states could be observed. The annual Current Population Surveys by the Bureau of the Census provide a time-series of percentages of individuals attending postsecondary education by age groups, sex, race, and income. Unfortunately, these surveys are not of a large enough sample to support a disaggregated analysis by state and type of institution.

Without such a detailed time-series survey the only approximation possible is to relate some measure of enrollment to a measure of the eligible population. For this study two alternative approaches are used. One enrollment rate measure is calculated by dividing the number of FTE undergraduates by the 18-20 year-old population. This ratio obviously does not reflect the percentage of 18-20 year-olds who are enrolled in a higher education institution. Many of the undergraduates are over 20 years of age. The second enrollment rate measure is calculated by dividing the number of first-time, full-time students by the number of high school graduates. This ratio does not reflect the proportion of high school graduates going directly into college after high school graduation. Many of the first-time, full-time students are older and have graduated from high school several years prior to entering college or may not have graduated from high school at all.

Enrollment rates by either of the above definitions actually declined in recent years for men and leveled off for women. The ratio of FTE undergraduates divided by the 18-20 year-old population for men reached a peak of 0.62 for 1969 through 1972 and then declined by 11% to 0.55 in 1975. The same ratio

for women has increased steadily through 1973, reaching a peak of 0.48, and then declining by 4% to 0.46 in 1975. In 1967 the ratio of the enrollment rate for men to women was 1.47 (0.50/0.34). By 1975 the ratio had dropped to 1.20 (0.55/0.46).

The enrollment ratios calculated by dividing the first-time, full-time enrollment by the number of high school graduates have also declined recently. For men, a peak of 0.64 was reached for this ratio in 1970 and by 1974 the ratio had dropped to 0.61. This decline is slightly less than the decline in the population based enrollment ratio which reflects the fact that high school graduation ratios have also been declining in recent years for men. The trend for women on the basis of this high school graduate based enrollment rate is similar to that for the men.

The state by state variations in these two enrollment rate measures for FY 1975 are given in Table 43. It should be noted that the enrollment rates in Table 43 include all state residents that are enrolled in higher education whether they are attending in-state or out-of-state. Because of the unique population bases for Alaska and the District of Columbia, their enrollment rates are extreme. For the remaining states the male population based enrollment rates ranged from 0.36 (Rhode Island) to 0.79 (Arizona). For women the population based enrollment rate ranged from 0.32 (Kentucky) to 0.74 (Arizona). On the basis of the high school graduate enrollment rates, the men range from 0.39 (West Virginia) to 0.71 (Hawaii).

These variations are quite dramatic and even though the two enrollment measures are fairly crude indicators of the likelihood that an individual will attend college, it is clear that educational opportunities beyond high school are extremely variable across the fifty-one states.

The enrollment distribution across categories of institutions has changed

Table 43: Enrollment Rates by State for Men and Women: FY 1975

State	Resident FTE Undergraduates Divided by the 18-20 Year-Old Population		Resident First-Time, Full-Time Enrollment Divided by the Number of High School Graduates	
	Men	Women	Men	Women
Alabama	0.52	0.41	0.51	0.44
Alaska	0.24	0.30	0.33	0.36
Arizona	0.79	0.74	0.79	0.62
Arkansas	0.46	0.39	0.49	0.43
California	0.78	0.62	0.63	0.49
Colorado	0.52	0.41	0.59	0.46
Connecticut	0.64	0.53	0.70	0.53
Delaware	0.48	0.41	0.60	0.50
District of Columbia	1.03	0.74	1.82	0.99
Florida	0.44	0.36	0.57	0.45
Georgia	0.40	0.33	0.43	0.34
Hawaii	0.57	0.48	0.68	0.71
Idaho	0.55	0.43	0.60	0.49
Illinois	0.60	0.50	0.63	0.50
Indiana	0.44	0.39	0.46	0.41
Iowa	0.57	0.47	0.59	0.48
Kansas	0.57	0.46	0.58	0.49
Kentucky	0.37	0.32	0.39	0.33
Louisiana	0.47	0.38	0.54	0.41
Maine	0.67	0.39	0.79	0.51
Maryland	0.55	0.50	0.51	0.46
Massachusetts	0.54	0.45	0.61	0.53
Michigan	0.54	0.45	0.47	0.39
Minnesota	0.56	0.50	0.46	0.44
Mississippi	0.47	0.46	0.80	0.68
Missouri	0.54	0.44	0.56	0.46

(table continued)

Table 43 : continued

State	Resident FTE Undergraduates Divided by the 18-20 Year-Old Population		Resident First-Time, Full-Time Enrollment Divided by the Number of High School Graduates	
	Men	Women	Men	Women
Montana	0.53	0.41	0.44	0.40
Nebraska	0.67	0.48	0.63	0.52
Nevada	0.65	0.46	0.91	0.61
New Hampshire	0.47	0.50	0.63	0.40
New Jersey	0.65	0.59	0.73	0.00
New Mexico	0.48	0.43	0.39	0.34
New York	0.66	0.60	0.71	0.62
North Carolina	0.44	0.37	0.62	0.50
North Dakota	0.63	0.59	0.72	0.63
Ohio	0.51	0.42	0.49	0.40
Oklahoma	0.64	0.47	0.55	0.45
Oregon	0.72	0.56	0.84	0.57
Pennsylvania	0.55	0.41	0.56	0.44
Rhode Island	0.36	0.37	0.50	0.49
South Carolina	0.53	0.44	0.77	0.54
South Dakota	0.45	0.38	0.42	0.40
Tennessee	0.48	0.40	0.47	0.38
Texas	0.52	0.42	0.51	0.41
Utah	0.70	0.56	0.66	0.59
Vermont	0.51	0.41	0.61	0.48
Virginia	0.40	0.38	0.50	0.46
Washington	0.73	0.59	0.75	0.56
West Virginia	0.46	0.37	0.42	0.32
Wisconsin	0.57	0.49	0.63	0.51
Wyoming	0.48	0.40	0.46	0.38
National	0.55	0.46	0.61	0.48

significantly during the past eight years. For men the public four-year enrollment rate (population based) is the same in 1975 as it was in 1967 at a value of 0.30 while the public two-year rate has increased by 86% from 0.07 in 1967 to 0.13 in 1975 and the private four-year rate has actually declined by 8% from 0.12 in 1967 to 0.11 in 1975. Taking 1971 as the total enrollment rate peak, the public four-year rate has declined by 17%, the public two-year rate has increased by 8%, and the private four-year rate has declined by 15% by 1975. For women, the public four-year enrollment rate has increased from 0.20 in 1967 to 0.25 in 1975, the public two-year rate has increased from 0.04 to .10, and the private four-year rate has actually declined from 0.09 in 1967 to 0.08 in 1975.

Since the enrollment rates described so far include both in-state and out-of-state enrollment, a further level of disaggregation is to separate these two enrollment components. Some interesting comparisons between states can be made from these disaggregated enrollment rates. For example, if California is compared to lndiana, the total enrollment rate for California is 0.69 and 0.43 for Indiana. However, the four-year institution (public and private) enrollment rate is 0.29 for California adn 0.39 for Indiana. California has a much smaller percentage enrolled in four-year colleges and universities. If New Jersey is also compared to Indiana, New Jersey has a total enrollment rate of 0.59 while Indiana has 0.43. However, the total in-state enrollment rate for New Jersey is 0.38 compared to 0.35 for Indiana, a much closer level than the totals. Similar comparisons can be made between other states which make it difficult to determine which states offer the greatest educational opportunity to its residents. Some of these factors will be analyzed in more detail in the following analyses.

The analysis of enrollment rate variations across states involved a very extensive set of alternative specifications and approaches. Several key factors which appear to be essential for such an analysis are outlined below.

(1) In-State and out-of-state enrollment: It is necessary to segment a state's enrollment into three parts:

(a) State residents enrolled in-state

(b) State residents enrolled out-of-state

(c) Nonresidents enrolled in-state

For purposes of analyzing access within a state, it is the sum of (a) and (b) that is of direct interest. Because the in and out migration of students are not equal across the states, it is misleading to simply relate total enrollment in a state to that state's population. For the purposes of analyzing institutional, state, and local financing, it is the sum of (a) and (c) that may be of most interest. Also as shown in more detail below, many of the demographic, social, and economic factors that influence the level of state residents enrolled in-state (a) may have just the opposite effect on the level of state residents enrolled out-of-state (b). For example, increased attendance costs in a state may cause some individuals to enroll out-of-state rather than in-state thereby decreasing (a) and increasing (b). The net effect of this price increase in-state may leave (a) + (b) constant.

(2) Educational attainment of the population: Since parents have a significant influence on the life-style, career decisions, and educational objectives of their children, the level of educational attainment of the adult population, as measured by the percent of the 25+ year-old population who have completed at least one year of college is a very important and significant factor relating to the level of enrollment in each state. The five states with the highest ratios of state residents enrolled in-state

divided by the 18-20 year-old population have an average of 30% of the 25+ year-old population who have completed at least one-year of college while the five states with the lowest such ratios have an average of only 22% for the educational attainment measure. The same basic realtionship holds for the ratio of state residents enrolled out-of-state divided by the 18-20 year-old population of the state. The five states with the highest enrollment/population ratios have 25% of the 25+ year-old population who have completed at least one year of college while the five states with the lowest ratios have 20%.

The positive relationship between the in-state enrollment rate and the educational attainment measure is supported by the simple correlation of 0.57 given in Table 44. However, the correlation (0.07) for the out-of-state enrollment rate and the educational attainment measure does not suggest a significant positive relationship as the simple ranking did.

A third way of examing the relationship between the in-state enrollment rate and educational attainment is in terms of the change in the enrollment (instead of the actual level). The correlation between the proportional change in the enrollment rate from 1968 to 1974 and the educational attainment measure, as shown in Table 45, of -0.12 is not significant and weakly negative. This relationship suggests, at least, that the "highly educated" states are not becoming even more so relative to the other states. Perhaps some "catching-up" is occuring across the states in terms of educational attainment.

(3) Residence location of the population: The geographic accessibility of colleges and universities is often suggested as an important factor influencing attendance rates. The average percentage of the population living in metropolitan areas are 78% for the five states with the highest enrollment rates (in-state) and 34% for the lowest ranking states on the

Table 44 : Correlation Matrix for State Aggregate Characteristics

	1	2	3	4	5	6	7	8	9	10	11	12	13
(1) State Residents Enrolled In-State Divided by 18-20 Year-Old Population	1.0	-	++				++	-	--	--			
(2) State Residents Enrolled Out-of-State Divided by 18-20 Year-Old Population	-0.31	1.0				-		++	++	++	+		+
(3) Educational Attainment of the Population	0.57	0.07	1.0			-	+						
(4) Percent Living in Metropolitan Areas	0.26	-0.07	0.05	1.0	--		--					+	
(5) Percent Low Income Population	-0.23	-0.24	-0.16	-0.63	1.0		-		-			--	-
(6) Percent Nonwhite Population	-0.12	-0.28	-0.26	0.17	0.25	1.0			--				--
(7) Percent of Enrollment at Public Two-Year	0.59	-0.18	0.34	0.41	-0.32	0.24	1.0	--	--				
(8) Percent of Enrollment at Private Four-Year	-0.30	0.37	-0.23	0.17	-0.20	-0.26	-0.41	1.0	++	++	++	++	++
(9) Average Tuition	-0.41	0.55	-0.19	0.08	-0.32	-0.36	-0.37	0.87	1.0	++	++	++	++
(10) Average Student Budget Divided by Average Weekly Earnings	-0.39	0.43	-0.13	-0.01	0.08	-0.06	-0.25	0.73	0.77	1.0	+	+	++
(11) Federal Student Aid Per FTE Undergraduate	-0.11	0.35	-0.16	0.02	-0.13	-0.23	-0.18	0.37	0.43	0.28	1.0	++	++
(12) State Student Aid Per FTE Undergraduate	0.017	0.24	-0.15	0.30	-0.47	-0.17	0.05	0.46	0.55	0.28	0.58	1.0	
(13) Institutional Student Aid Per FTE Undergraduate	-0.22	0.47	0.09	0.11	-0.36	-0.38	-0.18	0.63	0.66	0.46	0.41	0.24	1.0
Mean	0.44	0.084	23.1	59.6	43.0	13.3	21.8	19.5	761	15.6	298	32.4	74.2
Standard Deviation	0.084	0.060	4.5	26.1	4.4	13.2	12.9	12.0	343	3.4	124	48.4	43.8
Coefficient of Variation	0.19	0.72	0.20	0.44	0.10	0.99	0.59	0.62	0.45	0.22	0.42	1.49	0.59

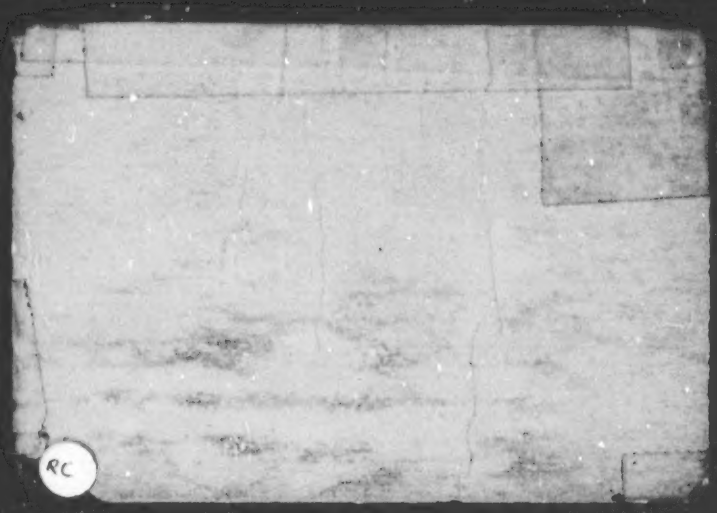
Code:

+ means statistically significant at the 5% level and positive
++ means statistically significant at the 1% level and positive
- means statistically significant at the 5% level and negative
-- means statistically significant at the 1% level and negative

Table 45 Correlations With State Aggregate Enrollment Rate Changes: FY 1968 to FY 1974

	State Residents Enrolled In-State Divided by 18-20 Year-Old Population: (1974/1968)	State Residents Enrolled Out-of-State Divided by 18-20 Year-Old Population: (1974/1968)
State Residents Enrolled In-State Divided by 18-20 Year-Old Population: (1974/1968)	1.0	0.22
State Residents Enrolled In-State Divided by 18-20 Year-Old Population: 1968	-0.13	0.12
State Residents Enrolled Out-of-State Divided by 18-20 Year-Old Population: 1968	0.12	0.22
Educational Attainment of the Population	-0.12	0.18
Percent Living in Metropolitan Areas	0.27[b]	0.06
Percent Low Income Population	-0.13	-0.08
Percent Nonwhite Population	0.42[a]	-0.03
Percent of Enrollment at Public Two-Year	0.27[b]	0.08
Percent of Enrollment at Private Four-Year	-0.20	-0.18
Average Tuition	-0.11	-0.17
Average Student Budget Divided by Average Weekly Earnings	0.01	-0.09
Federal Student Aid Per FTE Undergraduate	-0.17	-0.28[b]
State Student Aid Per FTE Undergraduate	0.06	-0.19
Institutional Student Aid Per FTE Undergraduate	-0.23	-0.18
Mean	1.18	1.06
Standard Deviation	0.23	0.56
Coefficient of Variation	0.19	0.53

a: Statistically significant at 1% level
b: Statistically significant at 5% level



1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

basis of the percent of the population living in metropolitan areas. The percentage differential between the top 5 and bottom 5 for the out-of-state enrollment rate is less pronounced. The correlation of 0.26 between the residence location measure and the in-state enrollment rate supports the ranking. Also the correlation between the residence location variable and the change in the in-state enrollment rate is 0.27 which is significantly different from zero. This relationship suggests that enrollments have been growing faster (at least relatively) in states with a greater percentage of the population living in metropolitan areas.

(4) Low income population: The attitudes towards education and the ability to pay for education beyond high school are related to the income level of the individual. This interrelationship can be illustrated with the significantly negative correlation between the education attainment level and the percent low income population. The five states with the highest in-state enrollment ratios have an average of 41% of the families with incomes under $6,000 while the five states with the lowest ratios have an average of 45% low income families. A correlation coefficient of -0.23 also supports this inverse relationship. The comparable ranking for the out-of-state enrollment ratio suggests a negative relationship with family income which is also supported by a correlation coefficient of -0.24. These correlations do not suggest that the low income states have 'caught up' any with the higher income, higher enrollment states during the last six years.

(5) Nonwhite population: The ethnic background of individuals, although correlated with family income, appears to have slightly different relationships with enrollment behavior across states. Using the percent nonwhite population as a crude measure of the ethnic composition of the population for each state the correlation of -0.12 in Table 44 suggests a weak negative relationship

between the ethnic composition of a state and the in-state enrollment rate. However, the five states with the highest out-of-state enrollment ratios have an average of 6% nonwhite population while the five states with the lowest out-of-state enrollment ratios have an average of 27% nonwhite population. This differential is supported by a correlation of -0.28 in Table 44 between the percent nonwhite population variable and the out-of-state enrollment ratio. Another very important relationship is shown in Table 45. The correlation between the percent nonwhite population and the ratio of the in-state enrollment rate in 1974 to the same enrollment rate in 1968 is 0.42! This significantly positive correlation suggests that the states with larger proportions of nonwhite population have dramatically increased their higher education participation relative to the other states.

(6) Institutional mix: In addition to demographic characteristics of the states, characteristics of the higher education system within each state also may influence the level of higher education participation. The percentage distribution of FTE undergraduate enrollment across the four main sectors of institutions provides a crude measure of the type of higher education system in each state. The relationship between in-state enrollment ratios and the percent of enrollment at public two-year colleges is very significant. The average percent of enrollment at public two-year colleges for the five states with the highest in-state enrollment ratios is 40% compared to 11% for the five states with the lowest in-state enrollment ratios. Since the percent of FTE undergraduate enrollment at private four-year institutions is likely to be low if the percent at public two-year colleges is high and vice versa, the opposite relationship is evident between the in-state enrollment ratio and the percent of enrollment at private four-year institutions. The five states with the highest in-state enrollment ratios have an average of 15% of their enrollment in private

four-year institutions, while the five states with the lowest in-state enrollment ratios average 29%. The correlations given in Table 44 support the significant relationships described above from the rankings.

Since tuition and hence the total cost of attendance are to a large part determined by the type of institution, significant relationships are expected between the in-state enrollment ratios and average tuition. The top five states in terms of the in-state enrollment ratio have an average tuition charge of $468, while the bottom five states have an average tuition charge of $1,135. Even on a total budget basis adjusted for variations in the average weekly earnings across states, the top five states had an average ratio of the student budget divided by average weekly earnings of 13.2 compared to 19.6 for the bottom five states. The correlations in Table 44 support and strengthen these relationships.

Another approach used was to exmaine changes over time in the enrollment/population ratios and related financing factors for each institutional sector. This procedure facilitates an analysis of enrollment rates relative to a historical base so that comparisons can be made across states. Table 46 presents simple correlation coefficients for the enrollment rate changes and financing changes. For the public four-year institutions the detailed data indicate that the states with the larger enrollment rate increases have also had the larger tuition increases and also the larger federal student aid increases. The correlations in Table 46 support these relationships. Just the opposite relationship is illustrated for the private four-year institutions by the correlations in Table 47 . The states with the larger increases in enrollment rates have also had smaller increases in tuition.

A slightly different approach was taken and the enrollment changes were examined relative to the actual levels of the financing variables. For the public four-year institutions, the states with the larger increases

Table 46 : Correlations for Enrollment Rate and Financing Changes 1972-1974 for Public Four-Year Institutions

		1	2	3
(1)	State Residents Enrolled In-State Divided by the 18-20 Year-Old Population: (1974/1972)	1.0	0.43[a]	0.44[a]
(2)	State Residents Enrolled Out-of-State Divided by the 18-20 Year-Old Population: (1974/1972)	0.43[a]	1.0	0.28[b]
(3)	Average Tuition (1974/1972)	0.44[a]	0.28[b]	1.0
(4)	Tuition Relative to Other Sectors (1974/1972)	0.52[a]	0.27[b]	0.86[a]
(5)	Federal Aid Dollars Per FTE Undergraduate (1974/1972)	0.15	-0.03	-0.05
(6)	Federal Aid Per FTE Undergraduate Relative to Other Sectors (1974/1972)	0.11	-0.10	-0.05

a: Statistically significant at 1% level
b: Statistically significant at 5% level

Table 47: Correlations for Enrollment Rate and Financing Changes 1972-1974 for Private Four-Year Institutions

		1	2	3
(1)	State Residents Enrolled In-State Divided by the 18-20 Year-Old Population: (1974/1972)	1.0	0.95[a]	-0.45[a]
(2)	State Residents Enrolled Out-of-State Divided by the 18-20 Year-Old Population: (1974/1972)	0.95[a]	1.0	-0.31[b]
(3)	Average Tuition (1974/1972)	-0.45[a]	-0.31[b]	1.0
(4)	Tuition Relative to Other Sectors (1974/1972)	-0.30[b]	-0.27[b]	0.07
(5)	Federal Aid Dollars Per FTE Undergraduate (1974/1972)	-0.09	-0.07	0.12
(6)	Federal Aid Per FTE Undergraduate Relative to Other Sectors (1974/1972)	-0.09	-0.08	0.18

a: Statistically significant at 1% level
b: Statistically significant at 5% level

in enrollment rates from 1972 to 1974 are states that have higher tuition levels in 1974 and lower levels of federal student aid per student. It should be noted, however, the states with the larger increases in enrollment rates also have lower tuition in 1974 relative to the other institutional sectors within each state. Also, the states with larger enrollment rate increases have a greater percentage of federal student aid in the form of grants. These relationships are supported by the correlations in Table 48. Correlations are also given in Table 49 for public four-year institutions for changes in enrollment rates between 1968 and 1974. In this case, there is a significant, negative relationship between the tuition level and the enrollemnt rate changes. The relationship with federal student aid per student is insignificant.

A similar set of analyses were undertaken for the private four-year institutions. The states with larger increases in enrollment rates between 1972 and 1974 are also states with lower tuition levels in 1974 lower levels of federal student aid per student, and higher proportions of grants in the total federal aggregate package of aid. These relationships are weakly supported by the correlations in Table 50. A similar negative relationship exists between the 1968-1974 enrollment rate changes and tuition levels for the private four-year institutions as shown in Table 51. Since more federal student aid (on a per student basis) goes to institutions with higher tuitions and higher tuitions are associated with declines in enrollment rates, the difference relatively between aid and enrollment rate changes is negative or insignificant. The potential aid effect may be offset by the tuition effect.

The four most significant variables with respect to variations in the ratio of state residents enrolled in-state to the 18-20 year-old population have been described previously and are illustrated in Table 52. The

Table 48 : Correlations for Enrollment Rate Changes (1972-74) and Financing Variables for Public Four-Year Institutions

		1	2	3
(1)	State Residents Enrolled In-State Divided by the 18-20 Year-Old Population: (1974/1972)	1.0	0.43[a]	0.26[b]
(2)	State Residents Enrolled Out-of-State Divided by the 18-20 Year-Old Population: (1974/1972)	0.43[a]	1.0	0.04
(3)	Average Tuition (1974)	0.26[b]	0.04	1.0
(4)	Tuition Relative to Other Sectors (1974)	-0.28[b]	-0.12	-0.14
(5)	Federal Aid Dollars Per FTE Undergraduate (1974)	0.12	-0.07	-0.08
(6)	Federal Aid Per FTE Undergraduate Relative to Other Sectors (1974)	-0.08	-0.07	-0.03

a: Statistically significant at 1% level
b: Statistically significant at 5% level

Table 49: Correlations for Enrollment Rate Changes (1968-74) and Financing Variables for Public Four-Year Institutions

		1	2	3
(1)	State Residents Enrolled In-State Divided by the 18-20 Year-Old Population: (1974/1968)	1.0	0.92[a]	-0.35[b]
(2)	State Residents Enrolled Out-of-State Divided by the 18-20 Year-Old Population: (1974/1968)	0.92[a]	1.0	-0.39[a]
(3)	Average Tuition (1974)	-0.35[b]	-0.39[a]	1.0
(4)	Tuition Relative to Other Sectors (1974)	-0.27[b]	-0.21	-0.14
(5)	Federal Aid Dollars Per FTE Undergraduate (1974)	0.14	0.07	-0.08
(6)	Federal Aid Per FTE Undergraduate Relative to Other Sectors (1974)	-0.04	0.04	-0.03

a: Statistically significant at 1% level
b: Statistically significant at 5% level

Table 50: Correlations for Enrollment Rate Changes (1972-74) and Financing Variables for Private Four-Year Institutions

		1	2	3
(1)	State Residents Enrolled In-State Divided by the 18-20 Year-Old Population: (1974/1968)	1.0	0.95[a]	-0.17
(2)	State Residents Enrolled Out-of-State Divided by the 18-20 Year-Old Population: (1974/1968)	0.95[a]	1.0	-0.17
(3)	Average Tuition (1974)	-0.17	-0.17	1.0
(4)	Tuition Relative to Other Sectors (1974)	0.13	0.13	0.32[b]
(5)	Federal Aid Dollars Per FTE Undergraduate (1974)	-0.07	-0.09	0.17
(6)	Federal Aid Per FTE Undergraduate Relative to Other Sectors (1974)	-0.01	-0.04	-0.41[a]

a: Statistically significant at 1% level
b: Statistically significant at 5% level

Table 51 : Correlations for Enrollment Rate Changes (1968-74) and Financing Variables for Private Four-Year Institutions

	1	2	3
(1) State Residents Enrolled In-State Divided by the 18-20 Year-Old Population: (1974/1968)	1.0	0.93[a]	-0.26[b]
(2) State Residents Enrolled Out-of-State Divided by the 18-20 Year-Old Population: (1974/1968)	0.93[a]	1.0	-0.17
(3) Average Tuition (1974)	-0.26[b]	-0.17	1.0
(4) Tuition Relative to Other Sectors (1974)	0.33[b]	0.37[b]	0.32[b]
(5) Federal Aid Dollars Per FTE Undergraduate (1974)	-0.06	-0.10	0.16[a]
(6) Federal Aid Per FTE Undergraduate Relative to Other Sectors (1974)	-0.08	-0.11	-0.41

a: Statistically significant at 1% level
b: Statistically significant at 5% level

Table 52: In-State Enrollment Rate Related to State Characteristics: FY 1974

	State Residents Enrolled In-State Divided by 18-20 Year-Old Population
Constant	-0.0519
Percent of population 25+ completed at least one year of college	(3.2)* 0.00698
High school graduation rate	(3.1) 0.296
Percent of FTE undergraduates at public two-year colleges	(2.1) 0.00170
Percent of population living in metropolitan areas	(2.5) 0.00110
Mean of dependent variable	0.440
R^2	0.43

* t-statistics in parentheses.

estimated coefficients and the t-statistics calculated from regressing the in-state enrollment ratio on the four variables in addition to a constant term are given in Table 52 . These results indicate that the magnitude of the in-state enrollment ratio is directly related to the educational attainment level of the population, the high school graduation rate, the size of the public two-year college sector relative to the four-year sectors, and percent of the population living in metropolitan areas. These four variables account for 44% of the variation in the in-state enrollment ratios across the fifty-one states.

The total amount of federal student aid per FTE undergraduate is not significantly related to the in-state enrollment ratio. The enrollment ratio was regressed on a constant and the federal student aid variable alone and on all of the variables in Table 52 plus the federal student aid variable. In both cases, the estimated coefficients for the federal student aid variable were not significantly different from zero.

It is also important to note that the percent low-income population and the percent nonwhite population variable are not significantly related to the in-state enrollment ratio. The enrollment ratio was regressed on a constant and the low-income and nonwhite population variables only and on all of the variables in Table 52 plus the low-income and nonwhite population variables. In both cases, the estimated coefficients for the low-income and nonwhite population variables were not significantly different from zero.

All of the above analysis was for FY 1974. Another approach tried was to regress the ratio of the in-state enrollment rate in 1974 to the in-state enrollment rate in 1968. This calculation yields a proportional change variable for the in-state enrollment ratio. This proportional change variable was regressed on all of the variables discussed above in various combinations and the only significant relationship is shown in Table 53.

Table 53: In-State Enrollment Rate Change Related to Nonwhite Population Percentage

	State Residents Enrolled In-State Divided by 18-20 Year-Old Population (1974/1968)
Constant	1.08
	(3.1)*
Percent nonwhite population	0.00720
Mean of dependent variable	1.18
R^2	0.17

* t-statistics in parentheses.

It appears that the states with larger proportions of nonwhite populations experienced larger increases in their in-state enrollment ratios. As before, a significant relationship with the level of federal student aid per FTE undergraduate could not be established.

Another interesting relationship is presented in Table 54. The ratio of first-time, full-time students to high school graduates instead of the ratio of FTE undergraduates to the 18-20 year-old population is regressed on demographic characteristics of the states. The percent nonwhite population is estimated to have a significant positive relationship with the first-time, full-time student ratios. This result is consistent with the lower high school graduation rates observed earlier for the states with higher percentages of nonwhite population and suggests that the higher education participation rates relative to the base of high school graduates are actually higher for states with more non-white population. This result suggests that the reason the enrollment to population ratio is lower for states with higher nonwhite population percentages is the lower high school graduation rates.

Table 54: In-State First-Time Enrollment Rate Related to State Characteristics: FY 1974

Explanatory Variables	Resident First-Time, Full-Time Students Enrolled In-State Divided by the Number of High School Graduates
Constant	0.596
	(2.3)*
Percent nonwhite population	0.00236
	(1.0)
Percent low-income population	-0.00396
R^2	0.11

* t-statistics in parentheses.

VIII. FEDERAL STUDENT AID AND IMPACT ON FINANCIAL BURDEN

Given the diversity in student budgets and in the components determining net student budgets illustrated earlier in this summary, an attempt is made to relate these budget variations with several state demographic, economic, and education factors as well as with federal student aid variables. Correlations are given in Tables 55 through 57 for public four-year, public two-year, and private four-year institutions, respectively.

For all these institutional sectors the total amount of federal student aid per FTE undergraduate is significantly and negatively correlated with the net budget divided by weekly earnings. These results indicate that the more federal aid the smaller the net budget. This relationship may seem obvious at first, but if more aid went to states with high gross budgets and less aid to states with low gross budgets, a positive correlation might result. State student aid per FTE undergraduate, on the other hand, is not significantly correlated with the net budget and the net budget divided by earnings. For public two-year colleges, institutional student aid per FTE undergraduates is negatively and significantly correlated with the net budget and the net budget divided by weekly earnings. For private four-year institutions, institutional student aid per FTE undergraduate is positively and significantly correlated with the net budget and the net budget divided by weekly earnings. If these institutions allocate their aid on a need basis then they are shifting money from nonneedy students to needy students.

Table 55: Correlations for Student Budget and Related Variables for Public Four-Year Institutions: FY 1974

	Gross Resident Budget	Net Budget	Net Budget/ Weekly Earnings 1974	Net Budget/ Weekly Earnings 1974/1972	Net Budget/ Gross Budget
Gross resident budget	1.0	0.87[a]	0.29[b]	0.08	-0.09
Net budget	0.87[a]	1.0	0.43[a]	-0.02	0.41[a]
Net budget/weekly earnings: 1974	0.29[b]	0.43[a]	1.0	0.11	0.34[b]
Net budget/weekly earnings: 1974/1972	0.08	-0.02	0.11	1.0	-0.22
Net budget/gross budget	-0.09	0.41[a]	0.34[b]	-0.22	1.0
Total federal student aid	0.18	-0.30[b]	-0.25[b]	0.21	-0.96[a]
State student aid	0.55[a]	0.2[illegible]	0.08	0.09	-0.52[a]
Institutional student aid	0.24	0.[illegible]	-0.19	-0.04	-0.36[b]
Percent living in metropolitan areas	0.42[a]	0.46[a]	0.04	0.31[b]	0.18
Average weekly earnings	0.42[a]	0.37[b]	-0.67[a]	-0.15	-0.03
Percent nonwhite population	-0.25[b]	-0.11	0.20	-0.53[a]	0.27[b]
Percent low income population	-0.59[a]	-0.53[a]	0.32[b]	0.16	0.00
Residents enrolled in-state/ 18-20 population	-0.45[a]	-0.48[a]	-0.42[a]	0.25[b]	-0.17
Average tuition	0.72[a]	0.54[a]	0.30[b]	0.13	-0.25[b]
Range	1,759-2,917	1,412-2,731	8.85-17.56	0.63-1.26	0.68-0.94
Coefficient of Variation	0.11	0.12	0.16	0.11	0.06

a: Statistically significant at 1% level
b: Statistically significant at 5% level

Table 56: Correlations for Student Budget and Related Variables for Public Two-Year Colleges: FY 1974

	Gross Resident Budget	Net Budget	Net Budget/ Weekly Earnings 1974	Net Budget/ Weekly Earnings 1974/1972	Net Budget/ Gross Budget
Gross resident budget	1.0	0.94[a]	0.66[a]	0.08	0.07
Net budget	0.94[a]	1.0	0.79[a]	0.16	0.41[a]
Net budget/weekly earnings: 1974	0.66[a]	0.79[a]	1.0	0.41[a]	0.51[a]
Net budget/weekly earnings: 1974/1972	0.08	0.16	0.41[a]	1.0	0.28[b]
Net budget/gross budget	0.07	0.41[a]	0.51[a]	0.28[b]	1.0
Total federal student aid	0.09	-0.22	-0.30[b]	-0.21	-0.87[a]
State student aid	0.36[b]	0.15	0.09	0.11	-0.45[a]
Institutional student aid	-0.22	-0.28[b]	-0.25[b]	0.01	-0.27[b]
Percent living in metropolitan areas	0.39[a]	0.42[a]	0.13	0.17	0.19
Average weekly earnings	0.36[b]	0.24	-0.39[a]	-0.37[b]	-0.25[b]
Percent nonwhite population	-0.17	-0.06	0.18	0.13	0.28[b]
Percent low income population	-0.55[a]	-0.50[a]	0.03	0.42[a]	0.00
Residents enrolled in-state/ 18-20 population	0.34[b]	0.33[b]	0.21	-0.10	0.07
Average tuition	0.39[a]	0.35[b]	0.15	-0.21	-0.03
Range	1,045-3,057	931-2,774	6.90-19.02	0.64-2.67	0.66-0.98
Coefficient of Variation	0.21	0.22	0.25	0.33	0.08

a: Statistically significant at 1% level
b: Statistically significant at 5% level

Table 57 : Correlations for Student Budget and Related Variables for Private Four-Year Institutions; FY 1974

	Gross Resident Budget	Net Budget	Net Budget/ Weekly Earnings 1974	Net Budget/ Weekly Earnings 1974/1972	Net Budget/ Gross Budget
Gross resident budget	1.0	0.90[a]	0.70[a]	-0.13	0.22
Net budget	0.90[a]	1.0	0.81[a]	-0.08	0.61[a]
Net budget/weekly earnings: 1974	0.70[a]	0.81[a]	1.0	-0.17	0.55[a]
Net budget/weekly earnings: 1974/1972	-0.13	-0.08	-0.17	1.0	0.01
Net budget/gross budget	0.22	0.61[a]	0.55[a]	0.01	1.0
Total federal student aid	-0.08	-0.48[a]	-0.41[a]	-0.17	-0.94[a]
State student aid	0.25[b]	0.13	0.12	-0.26[b]	-0.12
Institutional student aid	0.44[a]	0.29[b]	0.26[b]	-0.08	-0.14
Percent living in metropolitan areas	0.38[b]	0.47[a]	0.20	0.13	0.44[a]
Average weekly earnings	0.33[b]	0.30[b]	-0.30[b]	0.24	0.10
Percent nonwhite population	-0.16	-0.01	0.06	-0.12	0.23
Percent low income population	-0.55[a]	-0.54[a]	-0.08	-0.04	-0.28[b]
Residents enrolled in-state/ 18-20 population	0.17	0.23	0.07	-0.15	0.27[b]
Average tuition	0.98[a]	0.87[a]	0.68[a]	-0.15	0.19
Range	1,915-4,576	1,330-4,081	9.30-28.50	0.61-1.91	0.46-0.98
Coefficient of Variation	0.19	0.24	0.25	0.16	0.11

a: Statistically significant at 1% level
b: Statistically significant at 5% level

For all categories of institutions, states with higher average weekly earnings have both higher gross budgets and higher net budgets but when the net budget is divided by weekly earnings the "richer" states appear to have a smaller financial burden associated with attending college. The "poorer" states have to commit a larger number of weekly earnings to pay for a year of college (on a net budget basis). The same type of relationship exists for the percent nonwhite and percent low income population variables. States with higher percentages of nonwhite population and higher percentages of low income population have smaller gross and net budgets but have a larger net budget relative to average weekly earnings.

As expected, for all institutional categories states with higher average tuition have higher gross budgets. However, this same relationship is maintained for both net budgets and net budget divided by earnings for all institutional sectors. Student aid does not neutralize the tuition effect on the student budgets across states. Also, higher tuition levels are not simply related to the earning level of each state.

The fourth column of correlations in Tables 55 through 57 are 1974 net budget divided by weekly earnings relative to the 1972 net budget divided by weekly earnings. For the public four-year institutions, states with larger percentages of nonwhite population have also had very small changes in the financial burden between 1972 and 1974. For private four-year institutions, states with larger state student aid programs and to

some extent larger amounts of federal student aid have had very small changes in the financial burden between 1972 and 1974.

The final column of correlations in Tables 55 through 57 is for the ratio of the net budget to the gross budget. For the private four-year institutions, the states with larger percentages of low income population have smaller values for this ratio which means a greater reduction in the gross budget has been provided by student aid from all sources.

The results in Table 60 are from regressing the net budget divided by earnings on the same two population variables and on average tuition. For the public four-year and private four-year institutions all of the estimated coefficients are positive and significantly different from zero. These results indicate that states with larger percentages of nonwhite and low income population and with higher tuitions have higher net student budgets relative to average weekly earnings. For the public two-year colleges none of the estimated coefficients were significantly different from zero.

The average net budget divided by average weekly earnings on a 1974 to 1972 relative basis was regressed on the same set of variables as above and the results are given in Table 61. For public four-year institutions, states with larger percentages of low income populations had the smaller increases in net budget relative to earnings between 1972 and 1974. For the public two-year colleges, states with smaller percentages of low income

Table 58, Average Resident Budget Related to Population Factors

Explanatory Variables	Institutional Sector		
	Public Four	Public Two	Private Four
Constant	3,635.0	4,291.0	6,987.0
Percent nonwhite population	(0.9)* -2.13	(0.1) 0.634	(0.5) -2.60
Percent low income population	(4.5) -31.73	(3.7) -54.67	(4.1) -79.54
R^2	0.37	0.30	0.30

* t-statistics in parentheses.

Table 59: Average Net Budget Related to Population Factors

Explanatory Variables	Institutional Sector		
	Public Four	Public Two	Private Four
Constant	3,208.0	3,946.0	6,611.0
Percent nonwhite population	(0.2)* 0.419	(0.8) 3.42	(0.6) 3.26
Percent low income population	(4.0) -28.9	(3.5) -51.79	(4.3) -87.37
R^2	0.28	0.26	0.30

* t-statistics in parentheses.

Table 60, Average Net Budget Divided by Average Weekly Earnings Related to Population and Financing Factors

Explanatory Variables	Institutional Sector		
	Public Four	Public Two	Private Four
Constant	-0.921	5.58	-12.44
Percent nonwhite population	(2.2)* 0.0423	(1.2) 0.0438	(1.9) 0.0502
Percent low income population	(3.5) 0.211	(0.5) 0.0655	(2.9) 0.344
Average tuition	(4.1) 0.00735	(1.3) 0.00132	(7.6) 0.00837
R^2	0.38	0.08	0.59

* t-statistics in parentheses.

Table 61. Average Net Budget Divided by Average Weekly Earnings (1974/1972) Related to Population and Financing Factors

Explanatory Variables	Institutional Sector		
	Public Four	Public Two	Private Four
Constant	0.699	-0.577	1.46
	(4.4)*	(0.1)	(1.0)
Percent nonwhite population	-0.0048	-0.000394	-0.00141
	(2.4)	(2.3)	(0.8)
Percent low income population	0.00814	0.0387	-0.00554
	(0.4)	(0.2)	(1.5)
Average tuition	0.0000358	0.00001824	-0.0000883
R^2	0.37	0.18	0.06

* t-statistics in parentheses.

population had smaller net budget increases. None of the estimated coefficients for the private four-year institutions were significantly different from zero.

The final set of regressions were run with the net budget divided by the gross budget regressed on the same set of variables as above. For all of the institutional sectors, although with varying degrees of significance, the percent of nonwhite population was estimated to have a positive effect on the net budget to gross budget ratio. These results suggest that the states with larger percentages of nonwhite population had smaller proportional changes from the gross budget with student aid.

Another potential effect of increased levels of federal student aid is a change in the level of tuition charged by the institutions. That is, the colleges or universities may raise their tuitions in an effort to obtain additional federal student aid and, in effect, convert it to institutional revenues. Individual state data on the level of tuition and the per student averages of federal, state, and institutional financial aid for public four-year, public two-year, and private four-year institutions were analyzed. These data for tuition and federal student aid are summarized below.

Sector	Average Tuition		Top 5 / Bottom 5	Federal Aid / Tuition	
	Top 5*	Bottom 5*		Top 5	Bottom 5
Public Four-Year	615	489	1.26	0.71	0.24
Public Two-Year	341	298	1.14	1.10	0.14
Private Four-Year	1,591	1,466	1.08	0.65	0.07

* in terms of Federal student aid per FTE undergraduate

Interestingly, the public four-year sector has the greatest tuition differential between the top 5 and bottom 5 states in terms of federal aid received per FTE undergraduate. Also, the private four-year institutions are covering the smallest proportion (0.65) of their tuition with federal student aid.

The correlations given in Table 62 indicate at best a weak positive relationship between federal student aid and tuition levels across the states for all three institutional categories. Since it is not possible to accurately disaggregate GSL funds by institutional sector it is included separately and represents the per student amount for all sectors. The level of GSL per FTE undergraduate has significant positive correlation with the average tuition. The level of state student aid per FTE undergraduate also exhibits a significant, positive relationship with average tuition. Also the private four-year institutions with higher levels of tuition appear to be using a larger amount of their revenues for student aid programs.

Previously, it was shown that there was some complementarity between federal student aid and state student aid. These relationships are expanded by institutional sector and summarized below:

Sector	State Student Aid		Top 5 / Bottom 5
	Top 5 *	Bottom 5 *	
Public Four-Year	38	10	3.8
Public Two-Year	52	21	2.5
Private Four-Year	11	28	0.4

* In terms of Federal student aid per FTE undergraduate

Except for the private four-year institutions, the states with higher levels of federal student aid also have a higher average level of state student aid. These averages should be interpreted cautiously since there are several states without programs and their zero levels drastically affect the averages.

Another way of examining the relationship between federal and state student aid levels per student is in terms of the average for states with and without state programs as summarized below.

Sector	Federal Aid Per Student for States		With / Without
	With Programs	Without Programs	
Public Four-Year	247.5	198.3	1.25
Public Two-Year	166.7	121.0	1.38
Private Four-Year	460.8	358.1	1.29

Table 63: Student Aid and Tuition Correlations

	Average Tuition at		
	Public Four-Year	Public Two-Year	Private Four-Year
Federal student aid less GSL per FTE undergraduate	-0.08	0.11	0.19
Percent grants of federal student aid	0.06	0.22	-0.14
GSL per student (all sectors)	0.38[b]	0.18	0.42[a]
State student aid per FTE undergraduate	0.56[a]	0.43[a]	0.44[a]
Institutional student aid per FTE undergraduate	-0.03	0.14	0.63[a]

a: Statistically significant at 1% level
b: Statistically significant at 5% level

The linkage between federal and institutional student aid is also of interest. State by state data on this relationship are summarized below.

Sector	Institutional Aid Per Student		Top 5 / Bottom 5
	Top 5	Bottom 5	
Public Four-Year	40.0	24.0	1.7
Public Two-Year	14.4	6.4	2.2
Private Four-Year	121.0	100.0	1.2

Consistent with the information presented in previous sections of this summary the variation in institutional student aid per undergraduate between states with high levels of federal student aid and states with low levels is smaller for the private than for the public colleges and universities.

The regression results from relating average tuition to the per FTE undergraduate amount of federal student aid and other state demographic and financing variables are given in Tables 63 through 65 for public four-year, public two-year, and private four-year institutions, respectively. The estimated coefficient for the federal student aid variable is positive for all three institutional sectors but statistically significant only for the private four-year colleges and universities. The estimated coefficient for the nonpublic institutional student aid per FTE undergraduate variable is positive and statistically significant for the private four-year institutions and not statistically different from zero for the other institutional sectors.

For all of the institutional categories the state student aid per FTE undergraduate variables has a positive and significant coefficient. For all three institutional sectors, states with larger levels of student aid per student from their own state aid programs have higher average tuitions. In addition for the private four-year sector, the states with larger levels of federal and nonpublic institutional source of student aid also have higher average tuition.

For the public four-year and public two-year sectors, the estimated

Table 63 : Tuition and Student Aid Analysis for Public Four-Year Institutions: FY 1974

Explanatory Variables	Average Tuition	Nonpublic Institutional Student Aid Per FTE Undergraduate
Constant	621.7	97.9
	(0.5)*	(1.0)
Federal student aid per FTE undergraduate	0.0558	0.0307
Nonpublic institutional student aid per FTE undergraduate	(0.6) -0.306	
		(0.5)
Average tuition		-0.0228
	(3.8)	(0.2)
Percent nonwhite population	-4.23	-0.0579
	(0.5)	(0.8)
Percent low-income population	-2.11	-1.02
	(3.9)	(0.4)
State student aid per FTE undergraduate	1.65	0.0518
R^2	0.49	0.04

* t-statistics in parentheses.

Table64: Tuition and Student Aid Analysis for Public Two-Year Institutions: FY 1974

Explanatory Variables	Average Tuition	Nonpublic Institutional Student Aid Per FTE Undergraduate
Constant	129.0	-6.13
Federal student aid per FTE undergraduate	(0.2)* 0.0535	(1.1) 0.0167
Nonpublic institutional student aid per FTE undergraduate	(0.7) 1.49	
Average tuition		(0.7) 0.0076
Percent nonwhite population	(1.8) -2.69	(2.2) -0.241
Percent low-income population	(0.5) 2.92	(1.1) 0.456
State student aid per FTE undergraduate	(3.0) 1.62	(1.2) -0.0496
R^2	0.28	0.21

* t-statistics in parentheses.

Table 65: Tuition and Student Aid Analysis for Private Four-Year Institutions: FY 1974

Explanatory Variables	Average Tuition	Nonpublic Institutional Student Aid Per FTE Undergraduate
Constant	1,389.0	96.0
Federal student aid per FTE undergraduate	(1.9)* 0.259	(0.2) -0.00652
Nonpublic institutional student aid per FTE undergraduate	(5.1) 2.68	
Average tuition		(5.1) 0.136
Percent nonwhite population	(1.0) 3.89	(1.8) -1.49
Percent low-income population	(0.6) -9.68	(0.7) -2.51
State student aid per FTE undergraduate	(3.2) 4.53	(1.5) -0.500
R^2	0.55	0.45

* t-statistics in parentheses.

coefficients for the percent nonwhite population variable are negative and statistically significant. The same coefficient for the private four-year institutions is positive but statistically not different from zero. The percent low income population variable is statistically insignificant for all sectors. The states with larger percentages of nonwhite populations are estimated to have lower average tuitions.

The results from regressing the amount of nonpublic institutional student aid per FTE undergraduate on various state demographic and financing variables are shown in Tables 63 through 65 for the three institutional sectors The results are not very exciting. The estimated coefficient for the federal student aid variable is statistically insignificant for all institutional sectors.

For the public two-year and private four-year sectors, the estimated coefficient for the percent nonwhite population variable is negative and statistically significant.

The estimated coefficient for the average tuition variable is positive and significant for the private four-year institutions. The states with higher levels of tuition also have higher levels of student aid from nonpublic institutional sources.

As illustrated in previous sections, there appears to be a positive relationship between the level of state student aid and the level of federal student aid on a per FTE undergraduate basis. The state aggregate results from regressing the level of state student aid dollars per FTE undergraduate on federal aid, tuition, and the percent low-income population are given in Table 66. The results are consistent with the previous descriptive relationships. States with larger levels of federal student aid dollars per FTE undergraduate larger average tuition, and smaller percentages of low-income population are estimated to have larger levels of state student

Table 66. State Student Aid Program Dollars Related to State Characteristics and Other Financing Variables: FY 1974

Explanatory Variables	State Student Aid Dollars Per FTE Undergraduate
Constant	103.5
Federal student aid dollars per FTE undergraduate	(4.3)* 0.185
Average tuition	(1.8) 0.0274
Percent low-income population	(3.0) -3.46
R^2	0.52

* t-statistics in parentheses.

aid per FTE undergraduate. The lower income states have not developed state student aid programs to the extent that the higher income states have.

IX. FEDERAL STUDENT AID IMPACT ON ACCESS

The institutional sector analysis used enrollment rate changes rather than enrollment rate levels. Results from regressing enrollment rate changes from 1972 to 1974 on financing variable changes are given in Table 67. For private four-year institutions, states with larger increases in tuition have also had smaller increases or larger decreases in enrollment rates. The opposite relationship between tuition and enrollment rate changes resulted for the public four-year institutions. A weak positive relationship was determined for the amount of federal student aid per FTE undergraduate at the public four-year institutions. The analysis is complicated by the interrelationship between tuition and federal student aid as well as other sources of aid.

Similar results are shown in Table 68 from regressing the 1972-74 enrollment rate changes on the 1974 levels of the financing variables. A final set of regression results is given in Table 69. The 1968-1974 enrollment rate changes are regressed on the 1974 levels of the financing variable. The equation for the public four-year institutions indicates a significantly negative relationship between the enrollment rate change and the average tuition level and significantly positive relationships for federal aid and percent grants and the enrollment rate changes.

Several of the states allow state residents to obtain aid from the state student aid program and attend college out-of-state while other states do not allow their aid money to flow out-of-state. An interesting comparison is shown in Table 70. The average percent of enrolled residents attending out-of-state over all fifty-one states is 16.0%. For the eight states with state student aid programs allowing portability the average percent of enrolled residents

Table 67: Enrollment Rate Change (1972-74) and Financing Change Regressions

	Public Four-Year	Private Four-Year
Constant	0.699	1.83
	(3.5)*	(3.4)
Average tuition	0.210	-0.770
	(1.3)	(0.3)
Federal aid per FTE undergraduate	0.0127	-0.00311
	(0.1)	(0.1)
Percent grants of total federal aid	-0.00242	-0.00126
R^2	0.23	0.20

* t-statistics in parentheses.

Table 68: Enrollment Rate Change (1972-74) and Financing Level Regressions

	Public Four-Year	Private Four-Year
Constant	0.752	1.03
	(2.0)*	(1.0)
Average tuition	0.000123	-0.0000607
	(2.0)	(0.3)
Federal aid per FTE undergraduate	0.000134	-0.0000272
	(2.4)	(0.2)
Percent grants of total federal aid	0.00443	0.000693
R^2	0.18	0.03

* t-statistics in parentheses.

Table 69: Enrollment Rate Change (1968-74) and Financing Level Regressions

	Public Four-Year	Private Four-Year
Constant	0.517	1.16
	(2.9)*	(1.4)
Average tuition	-0.00120	-0.000174
	(2.3)	(0.4)
Federal aid per FTE undergraduate	0.00105	-0.0000767
	(3.5)	(0.9)
Percent grants of total federal aid	0.0432	0.00610
R^2	0.31	0.08

* t-statistics in parentheses.

Table 70: State Student Aid Program Portability and Student Migration: FY 1975

States with portable state student aid programs:

Connecticut	29%*	Oregon	10
Delaware	19	Pennsylvania	20
Massachusetts	17	Rhode Island	13
New Jersey	36	Vermont	28

States with nonportable state student aid programs:

California	4%	Maine	44	South Dakota	10
Colorado	8	Maryland	25	Tennessee	9
Florida	9	Michigan	7	Texas	4
Georgia	16	Minnesota	16	Virginia	25
Idaho	20	Missouri	16	Washington	7
Illinois	18	New York	14	West Virginia	10
Indiana	18	North Dakota	13	Wisconsin	8
Iowa	18	Ohio	20		
Kansas	8	Oklahoma	8		
Kentucky	9	South Carolina	22		

Average for all states (51)	16.0%
Average for states with portable aid (8)	21.5%
Average for states with nonportable aid (27)	14.3%

*Percent of enrolled residents attending out-of-state.

attending out-of-state is 21.5% compared to 14.3% for the states not allowing portability. Causality cannot be implied from these results since the reason the states have allowed portability may be that they have large numbers of residents attending out-of-state rather than that the portability induced the higher level of out-of-state enrollment.

X. STATE ALLOCATION FORMULAS

Four of the six federal student financial assistance programs (NDSL, SEOG, CWSP, and SSIG) have state allocation formulas as part of their delivery mechanisms. These formulas are all essentially based on some measure of enrollment at higher education institutions within each state. Each of the formulas for the four programs are outlined below:

(1) NDSL

$$\text{State Allotment} = \frac{\text{Total Full-Time Enrollment in the State}}{\text{Total Full-Time Enrollment in the Nation}} \cdot \text{Total NDSL Appropriation}$$

(2) SEOG

$$\text{State Allotment} = \frac{\text{FTE Undergraduate Enrollment in the State}}{\text{FTE Undergraduate Enrollment in the Nation}} \cdot \text{Total SEOG Appropriation}$$

(3) CWSP

$$\text{State Allotment} = \frac{\text{Full-Time Enrollment in the State}}{\text{Full-Time Enrollment in the Nation}} \cdot \text{One-Third of the CWSP Appropriation}$$

$$+ \frac{\text{High School Graduates in the State}}{\text{High School Graduates in the Nation}} \cdot \text{One-Third of the CWSP Appropriation}$$

$$+ \frac{\text{Related Children under 18 Years of Age Living in Families with Incomes \$3,000 in the State}}{\text{Related Children under 18 Years of Age Living in Families with Incomes \$3,000 in the Nation}} \cdot \text{One-Third of the CWSP Appropriation}$$

(4) SSIG

$$\text{State Allotment} = \frac{\text{Total Headcount Enrollment in the State}}{\text{Total Headcount Enrollment in the Nation}} \cdot \text{Total SSIG Appropriation}$$

and

$$\text{State Allotment} = \text{Base Expenditure Level of State Scholarship Program}$$

To illustrate the variations in these alternative allocation formulas, the percentages of the total funding under each program that each state would receive based solely on the formula are given in Table 71. Because of the variations in enrollment and population characteristics across the states, these formulas lead to quite different allocations for each of the programs.

The actual percentage distribution for each of the student aid programs are illustrated in Table 72.

A comparison of actual versus formula distributions is given in Table 73.

Table 71: State Percentages of Alternative Funding Allocation Variables, FY 1974

State	18-20 year-olds	High school graduates	First-time full-time enrollment	FTE under-graduates	FT enroll-ment	Head count enroll-ment	Low income popu-lation	Composite index
Alabama	1.71	1.70	1.86	1.43	1.42	1.32	1.67	1.63
Alaska	.21	.16	.05	.10	.07	.14	.18	.16
Arizona	1.03	.93	1.20	1.30	1.21	1.44	1.06	1.08
Arkansas	.91	.91	1.21	.66	.64	.56	1.10	1.01
California	10.03	10.06	5.90	13.32	12.32	15.34	10.01	10.40
Colorado	1.33	1.29	2.55	1.47	1.54	1.38	1.51	1.50
Connecticut	1.37	1.47	1.13	1.34	1.29	1.41	1.41	1.39
Delaware	.30	.31	.51	.32	.30	.30	.30	.30
District of Columbia	.37	.21	.31	.64	.72	.85	.30	.36
Florida	3.44	2.80	1.57	3.06	2.98	2.93	4.26	3.95
Georgia	2.41	2.17	1.69	1.57	1.67	1.53	2.45	2.30
Hawaii	.49	.43	.62	.49	.54	.44	.51	.51
Idaho	.40	.48	.64	.41	.42	.37	.38	.39
Illinois	5.07	5.21	3.89	4.91	5.04	5.13	4.86	4.91
Indiana	2.57	2.75	3.44	2.15	2.22	2.09	2.39	2.38
Iowa	1.30	1.63	1.25	1.34	1.54	1.14	1.31	1.37
Kansas	1.16	1.25	1.49	1.22	1.23	1.13	1.14	1.16
Kentucky	1.60	1.55	1.90	1.20	1.23	1.16	1.49	1.45
Louisiana	1.88	1.75	3.08	1.55	1.57	1.41	1.55	1.56
Maine	.49	.54	.65	.44	.45	.38	.56	.54
Maryland	1.99	2.03	1.72	1.69	1.63	1.84	1.88	1.85
Massachusetts	2.78	2.92	2.71	3.48	3.74	3.47	2.69	2.88
Michigan	4.50	5.03	4.84	4.17	4.08	4.45	3.45	3.66
Minnesota	1.91	2.40	2.07	1.80	1.86	1.70	1.96	1.97
Mississippi	1.14	.96	1.13	1.01	1.07	.86	1.01	1.02
Missouri	2.22	2.33	2.50	2.01	2.03	2.02	2.27	2.23
Montana	.35	.45	.71	.35	.35	.29	.37	.37

(continued on next page)

Table 71 (continued)

State	18-20 year-olds	High school graduates	First-time full-time enrollment	FTE under-graduates	FT enroll-ment	Head count enroll-ment	Low income popu-lation	Composite index
Nebraska	.74	.83	1.14	.76	.78	.69	.72	.74
Nevada	.27	.26	.37	.23	.25	.21	.34	.32
New Hampshire	.36	.37	.52	.43	.46	.35	.41	.42
New Jersey	3.02	.00	2.78	2.53	2.40	2.66	3.39	3.00
New Mexico	.60	.65	.85	.54	.52	.51	.62	.60
New York	7.73	7.77	6.15	9.02	8.52	9.43	7.86	7.96
North Carolina	2.73	2.59	2.67	2.47	2.78	2.14	2.86	2.83
North Dakota	.32	.41	.61	.38	.41	.31	.37	.38
Ohio	5.15	5.76	5.69	4.37	4.48	4.14	4.38	4.87
Oklahoma	1.27	1.38	1.91	1.38	1.32	1.32	1.35	1.35
Oregon	1.04	1.15	1.31	1.35	1.37	1.38	1.17	1.20
Pennsylvania	5.22	6.01	4.08	4.78	4.91	4.60	5.47	5.41
Rhode Island	.43	.42	.46	.58	.55	.58	.47	.48
South Carolina	1.47	1.45	1.30	1.15	1.20	1.01	1.36	1.34
South Dakota	.35	.45	.73	.34	.35	.28	.39	.39
Tennessee	1.91	1.86	2.07	1.75	1.74	1.62	2.23	2.13
Texas	5.99	5.88	5.99	5.50	5.55	5.26	6.20	6.07
Utah	.68	.71	1.12	.97	1.04	.84	.51	.61
Vermont	.23	.24	.48	.35	.34	.29	.30	.30
Virginia	2.58	2.39	2.83	2.04	2.00	2.02	2.38	2.32
Washington	1.71	1.94	1.58	2.20	2.31	2.08	1.61	1.75
West Virginia	.76	.95	1.35	.76	.76	.71	.81	.81
Wisconsin	2.22	2.60	3.21	2.46	2.64	2.31	2.06	2.19
Wyoming	.19	.22	.18	.18	.17	.19	.19	.19

TABLE 72: State Percentages of Federal Student Aid Program Funds, FY 1975

State	SEOG	NDSL	CWSP	BEOG	GSLP	SSIG	Total
Alabama	1.58	1.46	2.12	2.80	.86	1.34	1.45
Alaska	.13	.14	.16	.05	.01	.00	.07
Arizona	.84	1.26	1.00	1.08	.70	.00	.87
Arkansas	.68	.74	1.04	1.08	.25	.57	.58
California	11.20	10.80	8.89	9.51	7.46	16.03	8.73
Colorado	1.31	1.76	1.56	1.16	3.47	1.44	2.47
Connecticut	1.19	1.22	1.10	.69	3.58	1.48	2.31
Delaware	.27	.30	.20	.24	.16	.31	.20
District of Columbia	.69	.69	.62	.49	.45	.85	.53
Florida	2.42	2.61	2.84	2.54	2.51	3.06	2.57
Georgia	1.43	1.76	2.03	2.14	.89	1.60	1.39
Hawaii	.35	.28	.35	.14	.24	.45	.26
Idaho	.39	.38	.33	.26	.13	.00	.23
Illinois	4.95	4.53	4.84	4.33	12.72	5.43	8.68
Indiana	2.17	2.38	1.99	1.53	2.33	2.18	2.16
Iowa	1.70	1.61	1.19	1.24	1.39	1.19	1.39
Kansas	1.17	1.30	1.00	1.19	.85	1.18	1.00
Kentucky	1.19	1.30	1.69	1.65	.77	1.21	1.13
Louisiana	1.63	1.53	1.95	2.80	.59	1.43	1.30
Maine	1.99	1.23	1.39	.50	.42	.39	.82
Maryland	1.66	1.43	1.53	1.55	1.50	1.93	1.52
Massachusetts	4.00	4.76	5.27	2.56	4.08	3.62	4.15
Michigan	4.12	4.03	3.48	3.82	1.79	3.63	2.80
Minnesota	3.13	2.13	2.34	1.93	2.78	1.78	2.54

(continued on next page)

Table 72 (Continued)

State	SEOG	NDSL	CWSP	BEOG	GSLP	SSIG	Total
Mississippi	1.45	1.04	1.62	2.64	.44	.87	1.07
Missouri	1.89	2.11	1.93	1.89	1.56	2.10	1.76
Montana	.32	.39	.67	.31	.30	.29	.37
Nebraska	.71	.86	.65	.71	.63	.72	.68
Nevada	.13	.22	.18	.14	.13	.00	.15
New Hampshire	.66	.82	.86	.29	.29	.00	.47
New Jersey	2.24	2.21	2.13	2.91	4.85	2.78	3.61
New Mexico	.64	.94	1.01	.90	.66	.00	.78
New York	8.10	8.09	7.37	11.73	15.63	9.87	12.22
North Carolina	2.36	2.33	2.53	3.49	.54	2.16	1.62
North Dakota	.75	.53	.57	.46	.60	.32	.58
Ohio	4.28	4.31	4.04	3.46	2.53	4.33	3.27
Oklahoma	1.17	1.42	1.28	1.87	.48	1.37	.97
Oregon	1.70	2.28	2.41	1.21	.64	1.44	1.29
Pennsylvania	4.51	4.52	4.43	4.77	9.11	4.81	6.83
Rhode Island	.53	.59	.62	.40	.84	.60	.69
South Carolina	1.05	1.01	1.49	2.00	.12	1.05	.78
South Dakota	.73	.58	.79	.55	.58	.29	.62
Tennessee	1.75	1.71	2.02	2.25	.73	1.64	1.34
Texas	4.62	5.05	5.37	6.62	4.07	5.50	4.78
Utah	.78	.40	.59	.30	.19	.88	.35
Vermont	.77	.56	.95	.23	.28	.30	.46
Virginia	1.63	1.77	2.01	1.68	1.06	2.10	1.44
Washington	2.22	2.88	2.10	1.38	.79	2.17	1.46
West Virginia	.80	.85	.90	.77	.48	.74	.66
Wisconsin	3.81	2.73	2.32	1.65	2.44	2.41	2.47
Wyoming	.20	.18	.22	.11	.07	.16	.12

TABLE 73 : Actual Versus Formula Distribution of the Supplemental Educational Opportunity Grant Program, FY 1975

State	Actual Allocation	90% Formula	Additional Allocation	Percent of Formula
Alabama	3,280	2,630	650	+ 24.7
Alaska	273	224	49	+ 21.9
Arizona	1,743	2,220	-477	- 21.5
Arkansas	1,405	1,306	99	+ 7.6
California	23,202	24,079	-877	- 3.6
Colorado	2,714	2,723	- 9	- .33
Connecticut	2,460	2,537	- 77	+ 3.0
Delaware	568	597	- 29	- 4.9
District of Columbia	1,436	1,212	224	+ 18.5
Florida	5,011	5,539	-528	- 9.5
Georgia	2,961	2,966	- 5	- .16
Hawaii	731	933	-202	- 21.7
Idaho	807	802	5	+ .62
Illinois	10,265	9,363	902	+ 9.6
Indiana	4,500	4,141	359	+ 8.7
Iowa	3,514	2,593	921	+ 35.5
Kansas	2,433	2,406	27	+ 1.1
Kentucky	2,460	2,313	147	+ 6.4
Louisiana	3,380	2,984	396	13.3
Maine	4,117	821	3,296	+401.
Maryland	3,443	3,133	310	+ 9.9
Massachusetts	8,288	6,472	1,816	+ 28.1
Michigan	8,542	7,908	634	+ 8.0
Minnesota	6,480	3,488	2,992	+ 85.8
Mississippi	3,014	1,902	1,112	+ 58.5
Missouri	3,918	3,879	39	+ 1.0
Montana	657	690	- 33	- 4.8
Nebraska	1,479	1,492	- 13	- .80
Nevada	275	317	- 42	- 13.2
New Hampshire	1,367	765	602	+ 78.7
New Jersey	4,637	4,607	30	+ .65
New Mexico	1,326	1,007	319	+ 31.7
New York	16,777	16,395	382	+ 2.3
North Carolina	4,888	4,532	356	+ 7.8

State	Actual Allocation	90% Formula	Additional Allocation	Percent of Formula
North Dakota	1,545	746	799	+107.1
Ohio	8,879	8,412	467	+ 5.6
Oklahoma	2,423	2,648	-225	- 8.5
Oregon	3,523	2,462	1,061	+ 43.1
Pennsylvania	9,351	9,027	324	+ 3.6
Rhode Island	1,099	1,063	36	+ 3.4
South Carolina	2,166	2,070	96	+ 4.6
South Dakota	1,520	690	830	+120.3
Tennessee	3,627	3,283	344	+ 10.5
Texas	9,570	10,277	-707	- 6.9
Utah	1,618	1,884	-266	- 14.1
Vermont	1,604	634	970	+153.0
Virginia	3,372	3,712	-340	- 9.2
Washington	4,601	4,085	516	+ 12.6
West Virginia	1,664	1,455	209	+ 14.4
Wisconsin	7,903	4,700	3,203	+ 68.1
Wyoming	418	354	64	+ 18.1